*Appendix G

URBAN OPERATIONS

The battalion plan of action was as follows: one platoon of Company "F," with a light machine gun section, would stage the initial diversionary attack. It would be supported by two tanks and two tank destroyers, who were instructed to shoot at all or any suspected targets. Observation posts had been manned on a slag pile to support the advance with 81-mm mortar fire...The platoon action was to be the first step...to reduce the town of Aachen.

...the remainder of our zone of action...would be cleared by Companies "F" and "G," who would execute a flanking attack, jumping off abreast of each other through the area secured by the Company "F" platoon...Preparatory fire by medium artillery was to be planned...Mortar observers would accompany each company...Tanks and tank destroyers were assigned to each company...

LTC Darrel M. Daniel
Commander, 2nd Bn, 26th Inf Regt
October, 1944, Battle of Aachen

Section I. INTRODUCTION

Urban operations (UO) are operations planned and conducted in an area of operations (AO) that includes one or more urban areas. An urban area is a topographical complex where man-made construction or high population density are the dominant features. The increasing world population and accelerated growth of cities means that UO in future conflicts will be very likely. The Infantry brigade will be the primary headquarters around which units will be task organized to perform UO. Operations in urban areas usually occur when—

- The battalion's assigned objective lays within an urban area.
- The urban area is key (or decisive) in setting and or shaping the conditions for current or future operations.
- The urban area is in the path of a general advance and cannot be surrounded or bypassed.
- Political or humanitarian concerns require the control of an urban area or necessitate operations within it.
- Defending from urban areas supports a more effective overall defense or cannot be avoided.
- Occupation, seizure, and control of the urban area will deny the threat control of the urban area and the ability to impose its influence on both friendly military forces and the local civilian population, therefore, allowing friendly forces to retain the initiative and dictate the conditions for future operations.

UO are often conducted against enemy forces that may be mixed in with the civilian population. Therefore, the ROE and the use of combat power can often be more restrictive.

G-1. FULL SPECTRUM OPERATIONS/UO CONCEPT

Battalions will conduct offensive, defensive, stability, and support (ODSS) operations within the operational concept shown in Figure G-1. (See FM 3-06 [90-10].) These operations comprise the spectrum of UO that a battalion must be prepared to conduct. Army commanders assigned to conduct UO will:

- Continually *assess* the urban environment to determine effects on operations.
- Conduct *shaping* operations that emphasize isolation and set the conditions for decisive operations.
- *Dominate* through simultaneous and or sequential operations that establish and maintain preeminent military control over the enemy, geographical area, or population.
- Plan for and execute *transitions* between mission types and forces, and ultimately to the control of a non-Army agency.

Figure G-1 depicts the potential simultaneity of UO. Battalions must be prepared to transition from one type of ODSS operation to another. Infantry battalions will normally conduct UO as part of a brigade, however there may be situations, such as stability and support missions, where an Infantry battalion may conduct independent UO. How battalions prepare for and execute ODSS UO will be determined by the factors of METT-TC (mission, enemy, terrain, time and troops available, and civil considerations). The ROE has significant importance within the mission and civil portions of METT-TC considerations.

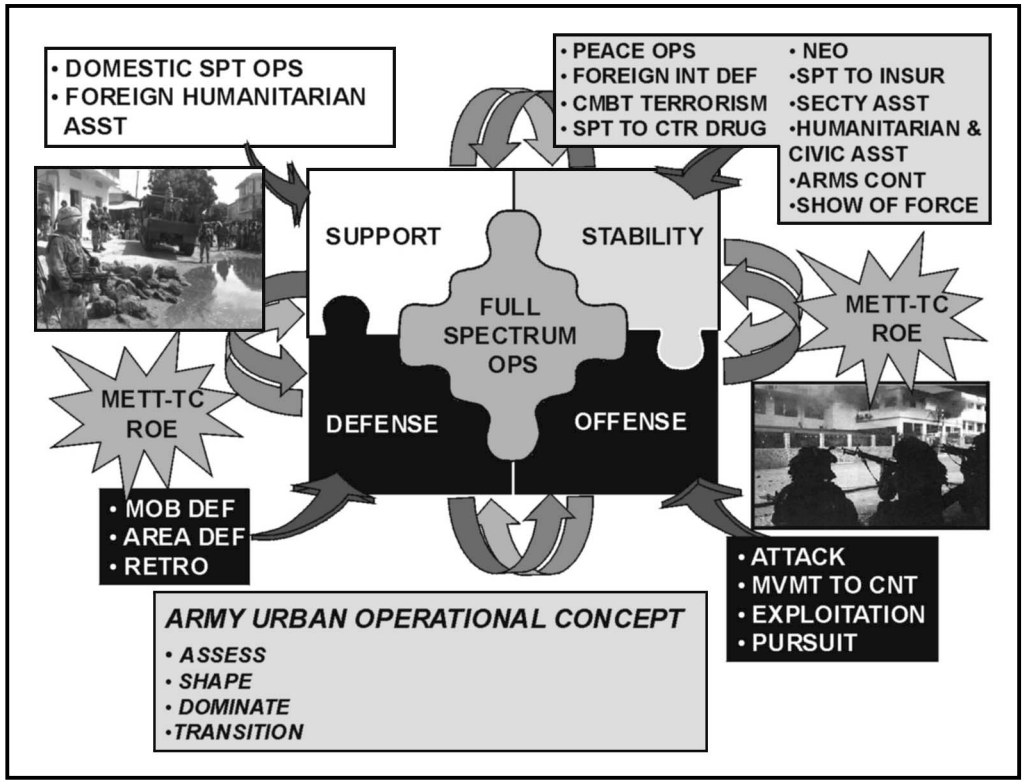

Figure G-1. Full spectrum operations/operational concept.

G-2. TACTICAL CHALLENGES

The Infantry battalion will face a number of challenges during the planning and execution of UO. The most likely challenges are discussed below.

a. **Contiguous/Noncontiguous Areas of Operations.** The battalion must be prepared to conduct ODSS operations in both continguous and noncontiguous areas of operations.

(1) Contiguous operations are military operations that the battalion conducts in an area of operations that facilitates mutual support of combat, CS, and CSS elements. Contiguous operations have traditional linear features including identifiable, contiguous frontages and shared boundaries between forces. For Infantry battalions, contiguous operations are characterized by relatively close distances between adjacent battalions, supporting brigade assets, and subordinate units and elements.

(2) In noncontiguous operations, the battalion may be required to operate independently, removed from brigade CS and CSS assets by distance and time. Additionally, subordinate companies may operate in isolated pockets, connected only through integrating effects of an effective concept of operations. Noncontiguous operations place a premium on initiative, effective information operations, decentralized security operations, and innovative logistics measures. Noncontiguous operations complicate or hinder mutual support of combat, CS, and CSS elements because of extended distances between subordinate units and elements.

b. **Symmetrical/Asymmetrical Threats.** In addition to being required to face symmetrical threats, the battalion must be prepared to face threats of an asymmetrical nature.

(1) Symmetrical threats are generally “linear” in nature and include those threats that specifically confront the battalion’s combat power and capabilities. Examples of symmetrical threats include conventional enemy forces conducting offensive or defensive operations against friendly forces.

(2) Asymmetrical threats are those that are specifically designed to avoid confrontation with the battalion’s combat power and capabilities. Asymmetrical threats are most likely to be based in and target urban areas to take advantage of the density of civilian population and infrastructure. Examples of asymmetrical threats include terrorist attacks; EW, to include computer-based systems; criminal activity; guerilla warfare; and environmental attacks. Asymmetrical threats may also attack the battalion and civilian population with weapons of mass destruction (WMD).

c. **Minimization of Collateral Damage and Noncombatant Casualties.** During urban operations, battalion commanders may be directed to minimize unnecessary collateral damage and noncombatant casualties. This must be balanced with mission accomplishment and the requirement to provide force protection. In all cases, commanders must comply with the law of war principles of military necessity and prevention of unnecessary injury or damage. Battalion commanders must be aware of the ROE and be prepared to request modifications when the tactical situation requires them. Changes in ROE must be rapidly disseminated throughout the battalion. Commanders and leaders must ensure that changes to the ROE are clearly understood by all soldiers.

d. **Quick Transition from Stability or Support Operations to Combat Operations and Back.** Battalion commanders must ensure that contingencies are

planned to transition quickly from stability and support to offensive or defensive operations and vice-versa. For example, it may be tactically wise for commanders to plan a defensive contingency with on-order offensive missions for certain stability and support operations that may deteriorate. Subordinate commanders and leaders must be fully trained to recognize activities that would initiate this transition.

G-3. URBAN BATTLESPACE

The battalion commander and staff can enhance situational understanding by maintaining a clear understanding of their urban battlespace. Urban battlespace includes urban airspace, supersurface (buildings), surface (street level), and subsurface (sewers, tunnels, subways) areas. Commanders and staff must be able to identify building types, construction materials, and building design and must understand the effectiveness and limitations of weapons against these factors. (See FM 90-10-1.) Commanders must also understand that combat under urban conditions will require them to visualize a three-dimensional battlespace. They must be aware of how their urban battlespace changes as friendly and enemy forces and civilians move, and as weather and environmental conditions change. Commanders must be prepared to react to these changes as necessary; for example, by moving assault and support elements in the offense, repositioning units in the defense, and synchronizing CS and CSS assets. Other factors that will impact battlespace are:

- CASEVAC and resupply procedures.
- Handling EPWs and noncombatants.
- Rules of engagement. (See paragraph G-4.)
- Weather conditions.
- Battlefield obscuration.
- Communications.
- Movement of vehicles. (How will the battlespace affect movement and target engagement?)

G-4. RULES OF ENGAGEMENT

Battalions must always follow ROE of some kind. ROE have a significant impact on how missions are executed during UO. The ROE must provide clear guidance to soldiers about when and how to employ force to accomplish the mission and to defend themselves.

a. Under certain conditions of UO, the ROE will be much more restrictive than under other conditions. For example, a particular mission might require ROE that limit the use of indirect fire weapons. On the other hand, a mission to clear buildings may require ROE that authorize force to clear rooms, and include authoritative guidance concerning measures to protect noncombatants, to breach obstacles, and to react to snipers.

b. One of the most significant issues raised is that of collateral damage. Collateral damage is the unintended and undesirable civilian personnel injuries or material damage adjacent to a target produced by the effects of friendly weapons. ROE will provide guidance concerning how to minimize collateral damage. For example, ROE may require use of nonlethal capabilities and munitions to the maximum extent possible prior to use

of lethal weapons and munitions, or restrict use of indirect fire weapons. The ROE will establish when certain types of weapons and munitions can be used (Table G-1).

Note: Nonlethal capability battalion kits will be in contingency stocks by September 2000 and will be issued to units on an as needed basis. Kits contain nonlethal weapons, devices, and munitions that are designed to incapacitate personnel or materiel.

c. A mission can transition quickly from a stability or support operation to offense or defense. This transition may be caused by threat actions or actions of noncombatants. Commanders must be prepared to react to this situation and request changes in the ROE when necessary.

d. ROE differentiate between the use of force for self-defense and for mission accomplishment. Commanders always retain the inherent authority and obligation to use necessary and proportional force for unit and individual self-defense in response to a hostile act or demonstrated hostile intent. The ROE used during Operation JUST CAUSE in Panama are shown in Table G-1.

ALL ENEMY MILITARY PERSONNEL AND VEHICLES TRANSPORTING THE ENEMY OR THEIR SUPPLIES MAY BE ENGAGED SUBJECT TO THE FOLLOWING RESTRICTIONS:
a. Armed force is the last resort. b. When possible, the enemy will be warned first and allowed to surrender. c. Armed civilians will be engaged only in self-defense. d. Civilian aircraft will not be engaged without approval from above division level unless it is in self-defense. e. Avoid harming civilians unless necessary to save US lives. If possible, try to arrange for the evacuation of civilians prior to any US attack. f. If civilians are in the area, do not use artillery, mortars, armed helicopters, AC-130s, tube- or rocket-launched weapons, or M551 main guns against known or suspected targets without the permission of a ground maneuver commander, LTC or higher (for any of these weapons). g. If civilians are in the area, all air attacks must be controlled by a FAC or FO. h. If civilians are in the area, close air support (CAS), white phosphorus, and incendiary weapons are prohibited without approval from above division level. i. If civilians are in the area, do not shoot except at known enemy locations. j. If civilians are not in the area, you can shoot at suspected enemy locations. k. Public works such as power stations, water treatment plants, dams, or other utilities may not be engaged without approval from above division level. l. Hospitals, churches, shrines, schools, museums, and any other historical or cultural site will not be engaged except in self-defense. m. All indirect fire and air attacks must be observed. n. Pilots must be briefed for each mission on the location of civilians and friendly forces. o. No booby traps. No mines except as approved by division commander. No riot control agents except with approval from above division level. p. Avoid harming civilian property unless necessary to save US lives. q. Treat all civilians and their property with respect and dignity. Before using privately owned property, check to see if any publicly owned property can substitute. No requisitioning of civilian property without permission of a company-level commander and without giving a receipt. If an ordering officer can contract for the property, then do not requisition it. No looting. Do not kick down doors unless necessary. Do not sleep in their houses. If you must sleep in privately owned buildings, have an ordering officer contract for it. r. Treat all prisoners humanely and with respect and dignity. s. Annex R to the OPLAN provides more detail. Conflicts between this card and the OPLAN should be resolved in favor of the OPLAN.
DISTRIBUTION: 1 per every trooper deployed to include all ranks.

Table G-1. ROE used during Operation JUST CAUSE.

SUPPLEMENTAL RULES OF ENGAGEMENT FOR SELECTED RECURRING OPERATIONS:
1. CONTROL OF CIVILIANS ENGAGED IN LOOTING. a. Senior person in charge may order warning shots. b. Use minimum force but not deadly force to detain looters. c. Defend Panamanian (and other) lives with minimum force including deadly force when necessary.
2. ROADBLOCKS, CHECKPOINTS AND SECURE DEFENSIVE POSITIONS. a. Mark all perimeter barriers, wires, and limits. Erect warning signs. b. Establish second positions to hastily block those fleeing. c. Senior person in charge may order warning shots to deter breach. d. Control exfiltrating civilians with minimum force necessary. e. Use force necessary to disarm exfiltrating military and paramilitary. f. Attack to disable, not destroy, all vehicles attempting to breach or flee. g. Vehicle that returns or initiates fire is hostile. Fire to destroy hostile force. h. Vehicle that persists in breach attempt is presumed hostile. Fire to destroy hostile force. i. Vehicle that persists in flight after a blocking attempt IAW instruction 2b is presumed hostile. Fire to destroy hostile force.
3. CLEARING BUILDINGS NOT KNOWN TO CONTAIN HOSTILE FORCE. a. Warn all occupants to exit. b. Senior person in charge may order warning shots to induce occupants to exit. c. Do not attack hospitals, churches, shrines, or schools, museums, and any historical or cultural sites except in self-defense. d. Respect and minimize damage to private property. e. Use minimum force necessary to control the situation and to ensure the area is free of hostile force.

Table G-1. ROE used during Operation JUST CAUSE (continued).

Section II. MISSION, ENEMY, TERRAIN AND WEATHER, TROOPS AND TIME AVAILABLE, AND CIVIL CONSIDERATIONS (METT-TC)

Planning, preparation, and conduct of UO are generally the same as any for other operation. However, the commander and staff must take into account special considerations when operating in this environment. The following paragraph provides special considerations for UO.

G-5. MISSION

In offensive operations, the battalion may have to assist with isolation of the objective, attacking an objective(s) within the urban area (securing footholds, seizing and or clearing buildings), and transitioning from combat to stability and support operations. In defensive operations, the battalion may be assigned the task to defend from a large urban area, or may integrate smaller urban areas into its defensive scheme.

a. **Objective.** The commander and staff must clearly understand the purpose of the operation. The battalion's objective may be terrain or force oriented. The commander must consider if committing his force in urban areas is required or beneficial to achieving his purpose.

b. **Intent**. During planning for offensive operations, the commander and staff must consider the overall purpose and intent of the operation and define what is required. For example, the commander must determine if clearing means every building, block by block, or seizure of a key objective, which may only require clearing along the axis of advance. During planning for defensive operations, the commander and staff must determine if retention of urban areas within the battalion AO is necessary to support

mission accomplishment, or directed by higher headquarters. Often, the battalion can integrate urban areas into the defensive scheme to develop a stronger defense.

G-6. ENEMY

The commander and staff must consider the strength, composition, disposition, and activities of the threat. They must consider both conventional and unconventional enemy forces and the tactics the enemy may employ. Enemy tactics may range from ambushes and snipers to large-scale conventional actions conducted by heavy forces. The IPB must address the known and potential tactics of all enemy forces and threats operating within and outside the urban area and their vulnerabilities. The IPB must consider the three-dimensional environment of urban areas - airspace, supersurface, surface, and subsurface. It should also consider the political, racial, ethnic, tribal, and religious factors that influence the enemy. (See FM 34-130 for a detailed discussion of urban IPB.)

a. The increasing availability of sophisticated technology has created unorthodox operational approaches that can be exploited by potential opponents. These approaches seek to counter the technological and numerical advantages of U.S. joint systems and forces, and to exploit constraints placed on U.S. forces due to cultural bias, media presence, ROE, and distance from the crisis location.

b. Offsetting their inherent weaknesses, enemy forces seek an advantage in urban terrain to remain dispersed and decentralized, adapting their tactics to provide them the best success in countering a U.S. response. Threats, in addition to conventional forces, may consist of:

- Unconventional forces.
- Paramilitary forces.
- Militia and special police organizations.
- Organized criminal organizations.

These forces range from units equipped with small arms, mortars, machine guns, antiarmor weapons, and mines to very capable mechanized and armor forces equipped with current generation equipment. Urban environments also provide many passive dangers such as disease from unsanitary conditions and psychological illnesses. While the active threats will vary widely, many techniques will be common to all. Figure G-2 provides a set of tactics available to potential threats opposing mission accomplishment in urban areas.

Figure G-2. Urban threat tactics.

(1) ***Use the Population to an Advantage.*** The populace of a given urban area represents key terrain; the side that manages it best has a distinct advantage. Future urban battles may see large segments of the populace remain in place, as they did in Budapest and Grozny. Battalions involved in urban stability and support operations will certainly conduct missions in and among the residents of the area.

(a) Threat forces may use the population to provide camouflage, concealment, and deception for their operations. Guerilla and terrorist elements may look no different than any other members of the community. Even conventional and paramilitary troops may have a "civilian" look. Western military forces adopted the clean-shaven, close-cut hair standard at the end of the nineteenth century to combat disease and infection, but twenty-first century opponents might very well sport beards as well as civilian-looking clothing and other "nonmilitary" characteristics.

(b) The civil population may also provide cover for threat forces, enhancing their mobility close to friendly positions. Threat forces may take advantage of U.S. moral responsibilities and attempt to make the civil population a burden on the Army's logistical and force protection resources. They may herd refugees into friendly controlled sectors, steal from U.S.-paid local nationals, and hide among civilians during offensive operations.

(c) The civil population may also serve as an important intelligence source for the threat. Local hires serving among U.S. soldiers, civilians with access to base camp perimeters, and refugees moving through friendly controlled sectors may be manipulated by threat forces to provide information on friendly dispositions, readiness, and intent. In addition, threat special purpose forces and hostile intelligence service assets may move among well-placed civilian groups.

(2) ***Win the Information War.*** Threat forces may try to win the information war as much as they may directly oppose the battalion's operations.

(a) Portable video cameras, Internet access, commercial radios, and cellular telephones are all tools that permit threat forces to tell their story. American "atrocities" may be staged and broadcast. Electronic mail may be transmitted to sympathetic groups to help undermine resolve. Internet websites provide easy worldwide dissemination of threat propaganda and misinformation. Hackers may gain access to U.S. sites to manipulate information to the threat's advantage.

(b) The threat may make skillful use of the news media. Insurgent campaigns, for example, need not be tactical military successes; they need only make the opposition's campaign appear unpalatable to gain domestic and world support. The media coverage of the TET Offensive of 1968 affected the will of both the American people and their political leadership. Although the battle for Hue was a tactical victory for the U.S., the North Vietnamese clearly achieved strategic success by searing the American consciousness with the high costs of urban warfare.

(3) ***Manipulate Key Facilities.*** Threat forces may identify and quickly seize control of critical components of the urban area to help them shape the battlespace to their own ends. Telephone exchanges provide simple and reliable communications that can be easily secured with off-the-shelf technologies. Sewage treatment plants and flood control machinery can be used to implement weapons of mass destruction (WMD) strategies or to make sections of the urban area uninhabitable. Media stations significantly improve the information operations position of the controlling force. Power generation and transmission sites provide means to control significant aspects of civilian society over a large area.

(4) ***Use the Three Dimensions of Urban Terrain.*** The threat will think and operate throughout all dimensions of the urban environment. Upper floors and roofs provide the urban threat forces excellent observation points and battle positions above the maximum elevation of many weapons. Shots from upper floors strike friendly armored vehicles in vulnerable points. Basements also provide firing points below many weapons' minimum depressions and strike at weaker armor. Sewers and subways provide covered and concealed access throughout the area of operations. Conventional lateral boundaries will often not apply as threat forces control some stories of the same building while friendly forces control others.

(5) ***Employ Urban Oriented Weapons.*** Whether they are purpose-built or adapted, many weapons may have more utility in an urban environment while others may have significant disadvantages. Urban threat weapons are much like the nature of urbanization and the urban environment: inventive and varied. Small, man-portable weapons, along with improvised munitions, will dominate the urban environment. Figure G-3 lists examples of threat weapons favored in UO.

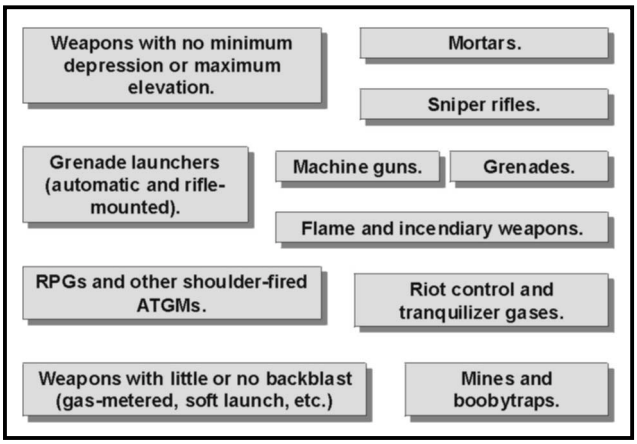

Figure G-3. Favored threat weapons.

(6) ***Engage the Entire Enemy Force.*** Threat forces may "hug" battalions operating in an urban area to avoid the effects of high-firepower standoff weapon systems. They may also try to keep all or significant portions of the battalion engaged in continuous operations to increase the susceptibility to stress-induced illnesses. UO, by their nature, produce an inordinate amount of combat stress casualties, and continuous operations exacerbate this problem. The threat may maintain a large reserve to minimize the impact of this on their own forces.

(7) ***Focus Attacks on Service Support and Unprotected Soldiers.*** Threat forces may prey on soldiers poorly trained in basic Infantry skills. Ambushes may focus on these soldiers while they are conducting resupply operations or moving in poorly guarded convoys. UO are characterized by the isolation of small groups and navigational challenges, and the threat may use the separation this creates to inflict maximum casualties even when there is no other direct military benefit from the action.

G-7. TERRAIN AND WEATHER

An urban area is a concentration of structures, facilities, and people that form the economic and cultural focus for the surrounding area. Battalion operations are affected by all five categories of urban areas. Cities, metropolises, and megalopolises with associated urban sprawl cover hundreds of square kilometers. Battalions normally operate in these urban areas as part of a larger force. Extensive combat in these urban areas involves units of division level and above.

- *Villages (population of 3,000 inhabitants or less).* The brigade's AO may contain many villages. Battalions and companies bypass, move through, defend from, and attack objectives within villages as a normal part of brigade operations.
- *Towns (population of over 3,000 to 100,000 inhabitants and not part of a major urban complex).* Operations in such areas normally involve brigades or divisions. Brigades may bypass, move through, defend in, or attack enemy forces in towns as part of division operations.
- *City (population over 100,000 to 1 million inhabitants).*

- *Metropolis (population over 1 million to 10 million inhabitants).*
- *Megalopolis (population over 10 million inhabitants).*

a. **Terrain.** A detailed analysis of the urban area and surrounding terrain is vital to the success of any operation in an urban area. (See FM 34-130.) The battalion commander must understand the elements of the urban infrastructure that are necessary for achieving the intent and end-state of the battalion's mission. Military maps normally do not provide sufficient detail for terrain analysis of an urban area. Recent aerial photographs and other current intelligence products are critical. Maps and diagrams of the city from other sources, such as local governments, tourist activities, or law enforcement services, can be useful. Products that can be developed by the National Imagery Mapping Agency (NIMA) can be specifically tailored for the area of operations. Also, the S2 should obtain maps and diagrams of the following:

- Subway systems, railways, and mass transit routes.
- Underground water, sewer, and utility systems.
- Electrical distribution systems/power stations and emergency services.
- Fuel supply and storage facilities.
- Mass communications facilities such as cellular phones, computer hubs, radio, and telephone.
- Public administration buildings, hospitals, and clinics.

(1) The terrain analysis should also identify the following:

- Structural characteristics of buildings, bridges, and transportation networks.
- Roads/highways and rivers/streams or other waterways that may be used as high speed avenues of approach.
- Analysis of the natural terrain surrounding the urban area (OAKOC).
- Analysis of the urban area itself to include street patterns, structure types, and available maneuver space. (See FM 34-130.)
- Covered and concealed approaches to the urban area.
- Key and decisive terrain inside and outside of the urban area.
- Identification of buildings, areas, or facilities protected by the law of land warfare and or restricted by current ROE such as churches, medical facilities, historic monuments, and other facilities dedicated to arts and sciences, provided they are not being used for military purposes. (See FM 27-10.)
- Stadiums, parks, open fields, playgrounds, and other open areas that may be used for landing zones or holding areas.
- Location of prisons and jails.
- Potential host nation support facilities such as quarries, lumber yards/major building supply companies, and warehouses.
- Power lines, telephone lines, and raised cables that may be hazards to helicopters.
- Significant fire hazards and locations of other toxic industrial materials (TIM).
- Weather effect products from topographic models or historical sources; for example, effects of heavy rains on local areas.

Note: Recent incidental or intentional destruction of structures or new construction can change the topography of an urban area.

(2) A close relationship with the local government and military forces can be very beneficial. They can provide information about population, fire fighting capabilities, locations of TIM, police and security capabilities, civil evacuation plans, location of key facilities, and, possibly, current enemy activities. They may also be able to provide translators.

(3) An infrastructure analysis of the urban area is also important. Because urban infrastructures vary greatly, a comprehensive list cannot be provided. However, common characteristics include:

- Urban street patterns and trafficability.
- Sources of potable water.
- Bulk fuel and transport systems.
- Communications systems.
- Rail networks, airfields, canals and waterways, and other transportation systems.
- Industries.
- Power (to include nuclear) and chemical production facilities and public utilities.

b. **Weather.** Weather analyses that are important to battalion operations include visibility, winds, precipitation, and temperature and humidity.

(1) ***Visibility***. Light data have special significance during urban operations. Night and periods of reduced visibility, to include fog, favor surprise, infiltration, detailed reconnaissance, attacks across open areas, seizure of defended strong points, and reduction of defended obstacles. However, the difficulties of night navigation in restrictive terrain, without reference points and near the threat, forces reliance on simple maneuver plans with easily recognizable objectives. Many major cities are located along canals or rivers, which often create a potential for fog in low-lying areas. Industrial and transportation areas are the most affected by fog due to their proximity to waterways. In heavy industrial areas, smog can also limit observation under all light conditions.

(2) ***Winds***. Wind chill is not as pronounced in urban areas. However, the configuration of streets, especially in close-orderly block and high-rise areas, can cause wind canalization. This increases the effects of the wind on streets that parallel the wind direction, while cross-streets remain relatively well protected. Because of these factors, swirling winds occur and the wind speed and direction may constantly change. This factor also affects the use of smoke for both friendly and threat forces. Downwind predictions for NBC and TIM will also be difficult.

(3) ***Precipitation***. Rain or melting snow often floods basements and subterranean areas, such as subways. This is especially true when automatic pumping facilities that normally handle rising water levels are deprived of power. Rain also makes storm and other sewer systems hazardous or impassable. Chemical agents and other TIM are washed into underground systems by precipitation. As a result, these systems may contain toxic concentrations much higher than surface areas and become contaminated "hot spots." These effects become more pronounced as chemical agents or TIM are absorbed by brick or unsealed concrete sewer walls.

(4) ***Temperature and Humidity.*** Air inversion layers are common over cities, especially cities located in low-lying "bowls" or in river valleys. Inversion layers trap dust, chemical agents, and other pollutants, reducing visibility and often creating a greenhouse effect, which causes a rise in ground and air temperature. The heating of buildings during the winter and the reflection and absorption of summer heat make urban areas warmer than surrounding open areas during both summer and winter. This difference can be as great as 10 to 20 degrees, and can add to the already high logistics requirements of urban combat. Summer heat, combined with the very physical requirements of urban combat, can cause severe heat-related injuries. Changes in temperature as a result of air inversions can also affect thermal sights during crossover periods of warm to cold and vice-versa. This period needs to be identified as it may differ from urban area to urban area.

G-8. TROOPS

During UO, the battalion is often augmented with additional assets, which may include engineers, ADA, and mechanized Infantry or armor support. Army aviation, FA, MP, public affairs, PSYOP, civil affairs, smoke and or decontamination, and LRS assets, when available, may also support the battalion under brigade control. (Sample task organizations are found in Figure G-4.) Actual task organizations are METT-TC dependent. How the battalion commander task organizes so that the BOS can be synchronized during mission execution is critical to tactical success. (See Appendix D.)

a. **Troop Density, Equipment, and Ammunition.** Troop density for offensive missions in urban areas can be as much as three to five times greater than for similar missions in open terrain. Troops require additional equipment such as ladders, ropes, grappling hooks, and other entry equipment. The ammunition consumption rates for small arms, grenades (all types), Claymore mines, handheld recoillesss weapons (light antitank weapons [LAWs] and AT4s), 25- and 120-mm HE, and explosives can be four times the normal rate. The staff must ensure the continuous supply of Classes I, III, V, and VIII supplies and water to forward units. Supplies should be configured for use and delivered as far forward as possible to supported units.

b. **Stress.** The commander and staff must consider the effects of prolonged combat on soldiers. Continuous close combat produces high psychological stress and physical fatigue. Rotating units that have been committed to combat for long periods can reduce stress. This may require the battalion to maintain a large reserve to assume the mission of committed forces, or the battalion may need to employ units in a follow and support role to reduce the strain on lead units. Extra effort and time should be taken to train and psychologically prepare soldiers for this type of combat. Ensuring that the proper support systems are in place and functional also reduces potential causes of stress (for example, medical/psychological, resupply, and so forth).

c. **Discipline.** All commanders must ensure their soldiers understand and follow the established ROE. The law of land warfare prohibits unnecessary injury to noncombatants and needless damage to property. This may restrict the commander's use of certain weapons, munitions, and tactics.

G-9. TIME

Combat in urban areas has a slower tempo and an increased use of methodical, synchronized missions. Additionally, the battalion may find itself planning different operations simultaneously. For example, a company team may have the mission to conduct offensive operations in one part of the battalion's AO and another company may be conducting stability missions in a different part of the AO. In planning UO, the commander and staff must take these factors into account. More time must be allowed for thorough reconnaissance and subordinate unit rehearsals. Mission-specific, in-country training may be required to orient soldiers on how to deal with civilians and provide soldiers with cultural awareness. Other key skills include sniper/countersniper operations, demolitions, breaching, fire fighting, entry and movement techniques, fighting position construction, booby trap recognition/neutralization skills, combat lifesaver training, and crowd control.

G-10. CIVIL CONSIDERATIONS

The commander and staff must understand the composition, activities, and attitudes of the civilian population, to include the political infrastructure, within the urban area. Various options are available to the commander to control the impact of civilians on the operation such as screening civilians, prohibiting unauthorized movement, diverting or controlling refugee movements, and evacuating noncombatants. Understanding the urban society requires comprehension of:

- Living conditions.
- Cultural distinctions.
- Ethnicity.
- Factions.
- Religious beliefs.
- Political affiliation and grievances.
- Attitude toward U.S. forces (friendly, hostile, neutral).

a. **Curfew and Evacuation.** A commander with the mission of defending an urban area may need to establish a curfew to maintain security or to aid in control of military traffic. (Curfews are not imposed as punishment. They are normally established to reduce noncombatant casualties and provide a measure of force protection.) A commander can require civilians to evacuate towns or buildings if the purpose of the evacuation is to use the town or building for imperative military purposes, to enhance security, or to safeguard those civilians being evacuated. If the commander takes this action, he must specify and safeguard the evacuation routes. Infantry battalions may be involved in securing routes, as well, and possibly safeguarding food, clothing, medical, and sanitary facilities. Evacuated civilians must be transferred back to their homes as soon as hostilities in the area have ceased. The staff must plan for and coordinate the movement and evacuation of civilians to ensure their actions do not interfere with the military operation. The battalion staff and supporting civil affairs units working with local officials coordinate the movements of civilians.

b. **Resistance Groups.** The battalion may encounter civilian resistance groups whose actions may range from providing the enemy with supplies, services, and noncombat support to actively fighting against friendly forces. Members of such resistance groups should be dealt with in accordance with applicable provisions of the

law of war. Commanders should seek guidance from the JAG concerning the detention and disposition of persons participating in acts harmful to friendly forces. The S2, PSYOP, and civil affairs units must work together to identify these threats and recommend, within the ROE, the appropriate preemptive action or response, when required. The activities of resistance groups may also benefit friendly forces. They may provide HUMINT; act as guides, liaisons or translators; and provide subject matter expertise on local public facilities such as refineries, power plants, and water works. They may also provide active resistance against the threat.

Section III. COMMAND AND CONTROL

Urban operations require centralized planning and decentralized execution. Therefore the staff must develop a detailed plan that synchronizes the BOS in order to meet the commander's intent and also provide subordinate units with the means to accomplish the mission.

G-11. FOCUS ON THE THREAT

During the mission analysis, the plan should focus on the factors of METT-TC. Make the plan enemy oriented instead of terrain oriented. Use terrain factors to defeat the threat. Considerations include, but are not limited to, the following:

- Thorough evaluation of the urban area's related terrain and threat may take much longer than other environments. This time factor will also impact friendly planning efforts.
- Determine the threat's location, strength, and capabilities. Develop a plan that defeats his direct and indirect fire systems.
- Focus the axis of advance on the threat's weaknesses while maintaining adequate force protection measures. When possible employ multiple and supporting axes of advance.
- Divide the objective area into manageable smaller areas that facilitate battalion TF maneuver.
- Isolate the objective area and establish a foothold at the point of entry. The location chosen for the foothold must allow for expansion.
- The brigade and battalion maneuver plans directly affect the company schemes of maneuver. Every platoon within the battalion must know what enemy targets will be engaged by brigade and battalion assets.

G-12. COMMANDER'S CRITICAL INFORMATION REQUIREMENTS (CCIR)

The is information required by the commander that directly affects his decisions and dictates the successful execution of tactical operations. The battalion staff must develop the components of CCIR that facilitate the commander's ability to make decisions that impact the plan during urban operations. Essential elements of friendly information (EEFI) should address the enemy commander's priority intelligence requirements (PIR) and friendly forces information requirements (FFIR) should be items that cause the commander to make decisions that impact the plan. The following are examples of PIR, EEFI, and FFIR that would help the commander in an urban environment.

a. **PIR**. These are intelligence requirements that a commander has anticipated and that have stated priority in task planning and decision making. They include requirements about threat force disposition, composition, capabilities, and strength in relation to friendly forces and the AO. Examples include:

- Where are the threat battalion and company command posts?
- What are the most likely threat infiltration routes into the battalion area of operations?
- What streets and alleys restrict movement of friendly armored and wheeled vehicles?
- Where are the likely threat strong points and engagement areas?
- What is the threat air defense capability against Army aviation assets?

b. **EEFI.** These are critical aspects of a friendly operation that, if known by the threat, would subsequently compromise, lead to failure, or limit success of the operation and, therefore, must be protected from detection. Examples include:

- Is the battalion command net vulnerable to intercept, direction finding, and electronic attack?
- Is the battalion vulnerable to HUMINT collection and sabotage by local nationals?
- Where are the battalion supply routes/LOC most vulnerable to ambush and snipers?
- Are friendly troop concentrations and movement under threat observation?

c. **FFIR.** This is information the commander and staff need about the friendly forces available for the operation. Examples include:

- Scouts captured or compromised.
- Main bridge locations along ground route that have been blown.
- OPORD compromised.
- Loss of cryptographic equipment.
- Expected personnel and equipment replacements that did not arrive.

G-13. TASK-ORGANIZE UNITS TO ACCOMPLISH SPECIFIC TASKS

UO may require unique task organizations. For example, UO provide one of the few situations where Infantry and armor elements may be effectively task-organized below platoon levels. Battalion commanders must consider providing assets where they will be needed to accomplish specific tasks. All phases of mission execution must be considered when developing task organization. Changes in task organization may be required to accomplish different tasks during mission execution. Figure G-4 depicts a sample task organization for a light Infantry TF conducting an offensive UO that consists of a main effort, two supporting efforts, and a reserve.

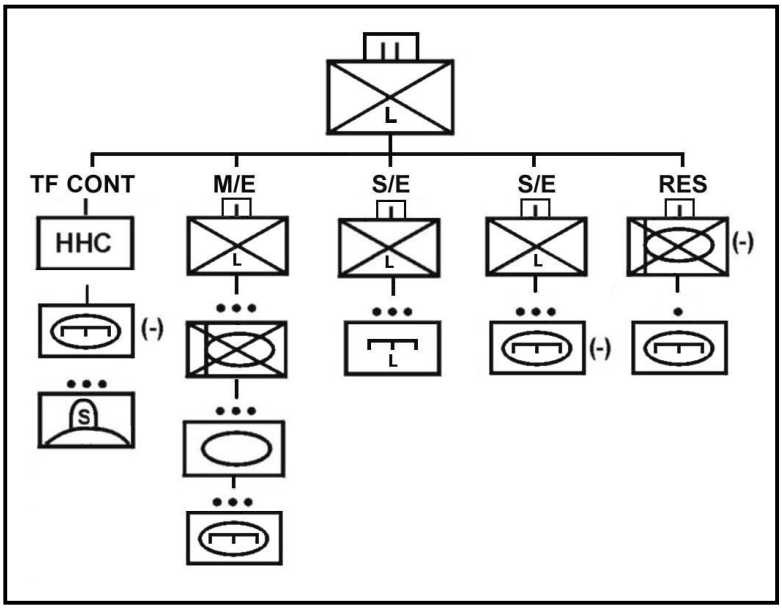

Figure G-4. Sample offensive task organization.

Note: The task organization shown in Figure G-4 may change after the assault when the TF reorganizes for follow-on missions.

G-14. REHEARSALS

After developing a thorough, well-synchronized plan, battalion commanders should require subordinate units to conduct combined arms rehearsals at the levels at which they occur, and include all phases of the operation. When conducted properly, combined arms rehearsals identify potential problems in the synchronization of the plan between maneuver, combat support, and combat service support elements. Rehearsals provide a means for units that seldom operate together to train collective skills. Rehearsals should be started early in the troop-leading process. Some rehearsals can start shortly after receipt of warning orders. Subordinate units can rehearse drills, such as breaching, clearing buildings, and moving between buildings, before receiving a detailed plan. Infantry can also rehearse aspects of operating close to armored vehicles. The battalion commander and staff must allocate sufficient time to subordinate units to conduct rehearsals. Rehearsals that subordinate units should consider include, but are not limited to, the following:

- Communications procedures.
- Direct fire control plan.
- Fires (lethal and nonlethal effects).
- Breaching.
- Maneuver.

G-15. FIRE SUPPORT

Often, the role of fires in UO is to get the maneuver force into or around the urban area with minimal casualties, so the commander has the maximum combat power to close with the enemy and finish the fight. The fire support officer can use the acronym SOSR

(suppress, obscure, secure, reduce) as a reference to assist the commander in developing his intent for fires. History has shown that short, violent preparatory fires are much more effective than fires of long duration. Fires of shorter duration also produce less rubble and collateral damage. If available, the smoke decontamination platoon should be considered as a fire support asset for obscuration. Nonlethal capabilities are also planned and coordinated by the fire support officer for the battalion commander. Civil affairs and PSYOP assets should be coordinated with the appropriate command and control warfare/information operations planning headquarters.

Section IV. OFFENSIVE OPERATIONS

"*From 1942 to the present, shock units or special assault teams have been used by attackers (and often by defenders) with great success. These assault teams are characterized by integration of combined arms. Assault teams typically contain Infantry with variable combinations of armor, artillery, or engineers."*

Technical Memorandum 5-87
Modern Experience in City Combat
U.S. Army Human Engineering Laboratory
March, 1987

G-16. OFFENSIVE FRAMEWORK

Figure G-5 depicts the urban operational framework applied to offensive operations. (The brigade commander's primary responsibility is to set the conditions for tactical success for his subordinate units. Whenever possible, close combat by maneuver units is minimized and the brigade commander attempts to move from shape to transition.) The tactical tasks of subordinate units are also shown in Figure G-5. Infantry battalions will be used as maneuver elements to execute the tactical tasks shown. Specific discussion of these tasks is contained in paragraph G-17. While the elements of the operational framework are not phases, tactical tasks may become phases at the battalion level and below, based on the factors of METT-TC. There is no clear line of distinction that delineates when the battalion moves from one task to another. Properly planned and executed offensive operations will involve all tactical tasks shown. They may be conducted simultaneously or sequentially, depending on the factors of METT-TC. During offensive operations, the brigade commander's intent normally includes:

- Synchronizing precision fires, information operations, and nonlethal capabilities.
- Isolating decisive points.
- Using superior combat power to destroy high pay-off targets.
- Using close combat, when necessary, against decisive points.
- Transitioning quickly to stability and or support operations.

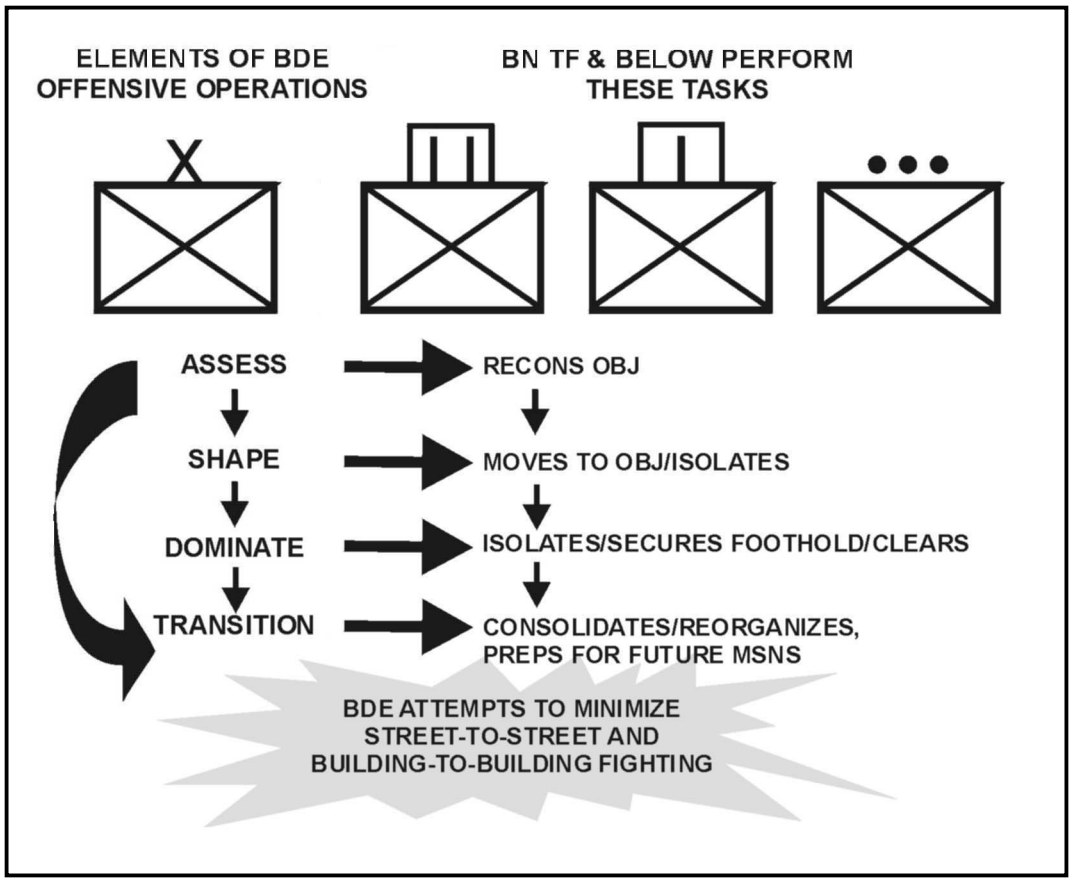

Figure G-5. Offensive urban operational framework.

G-17. TYPES OF OFFENSIVE OPERATIONS

At battalion level, the offense takes the form of either a hasty or deliberate attack. Both hasty and deliberate attacks are characterized by as much planning, reconnaissance, and coordination as time and the situation permit.

a. **Hasty Attack.** Infantry battalions conduct hasty attacks as a result of a movement to contact, a meeting engagement, or a chance contact during a movement; after a successful defense or part of a defense; or in a situation where the unit has the opportunity to attack vulnerable enemy forces, IAW the ROE. Battalions may also be required to conduct hasty attacks for force protection as a result of deteriorating conditions from stability and support operations. The hasty attack in an urban area differs from a hasty attack in open terrain because the close nature of the terrain makes command, control, and communications difficult. Also, massing fires to suppress the enemy may be difficult. In urban areas, incomplete intelligence and concealment may require the maneuver unit to move through, rather than around, the friendly unit fixing the enemy in place. Control and coordination become important to reduce congestion at the edges of the urban area.

b. **Deliberate Attack.** A deliberate attack is a fully synchronized operation that employs all available assets against the enemy's defense, IAW with the ROE. It is necessary when enemy positions are well prepared, when the urban area is large or

severely congested, when the element of surprise is lost, or when the ROE requires the precise application of combat power and lethal force. Deliberate attacks are characterized by detailed planning based on available information, thorough reconnaissance, preparation, and rehearsals. Given the nature of urban terrain, the deliberate attack of an urban area is similar to the techniques employed in assaulting a strong point. Attacking the enemy's main strength is avoided and combat power is focused on the weakest point of his defense. At the battalion level, a deliberate attack of an urban area usually involves the sequential execution of the following tactical tasks.

(1) ***Reconnoiter the Objective.*** This involves making a physical reconnaissance of the objective with battalion assets and those of higher headquarters, as the tactical situation permits. It also involves making a map reconnaissance of the objective and all the terrain that will affect the mission, as well as the analysis of aerial imagery, photographs, or any other detailed information about the building(s) or other urban terrain the battalion is responsible for. Additionally, any human intelligence (HUMINT) collected by reconnaissance and surveillance units, such as the battalion reconnaissance platoon, snipers, and so forth, should be considered during the planning process.

(2) ***Move to the Objective.*** This may involve moving through open and or urban terrain. Movement should be made as rapidly as possible without sacrificing security. Movement should be made along covered and concealed routes and can involve moving through buildings, down streets, in subsurface areas, or a combination of all three. Urban movement must take into account the three-dimensional aspect of the urban area.

(3) ***Isolate the Objective***. Isolation begins with the efforts of SOF units controlled by higher headquarters to influence enemy and civilian actions. The battalion commander should consider using PSYOP teams to broadcast appropriate messages to the threat and to deliver leaflets directing the civilian population to move to a designated safe area, if the units are available to support the battalion. These actions must be coordinated with the overall PSYOP plan for the brigade and must not sacrifice surprise. By themselves, PSYOP are seldom decisive. They take time to become effective and often their effects are difficult to measure until after the actual attack. Under some METT-TC conditions, PSYOP have achieved results far outweighing the effort put into them.

(a) In certain situations that require precise fire, snipers can provide an excellent method of isolating key areas. Skillful application of snipers can provide lethal fire while simultaneously minimizing collateral damage and noncombatant casualties.

(b) Isolating the objective also involves seizing terrain that dominates the area so that the enemy cannot supply, reinforce, or withdraw its defenders. It also includes selecting terrain that provides the ability to place suppressive fire on the objective. (This step may be taken at the same time as securing a foothold.) If isolating the objective is the first step, speed is necessary so that the defender has no time to react. Battalions may be required to isolate an objective as part of brigade operations, or may be required to do so independently (Figure G-6). Depending on the tactical situation, companies within the battalion may isolate an objective by infiltration and stealth.

(c) Cordon is a tactical task given to a unit to prevent withdrawal from or reinforcement of a position. A cordon is a type of isolation. It implies seizing or controlling key terrain and or mounted and dismounted avenues of approach. Figure G-6 depicts a brigade attacking to seize and clear OBJ EAGLE using the cordon and attack technique. One battalion TF (four company teams) cordons (isolates) OBJ EAGLE by

occupying battle positions. (A cordon may also be accomplished through use of ambushes, roadblocks, checkpoints, OPs, and patrols.) Skillful application of fires and other combat multipliers may also defeat the enemy when this technique is used and minimize or preclude close combat. In the example shown in Figure G-6, the battle positions are oriented to place fires on the enemy leaving OBJ EAGLE and to prevent his withdrawal from the objective area. The factors of METT-TC will determine how the battle positions are oriented and what the mission end-state will be. Additional direct fire control measures, such as TRPs and engagement areas, as well as indirect fire control measures, can focus fires and assist in canalizing the enemy into desired areas.

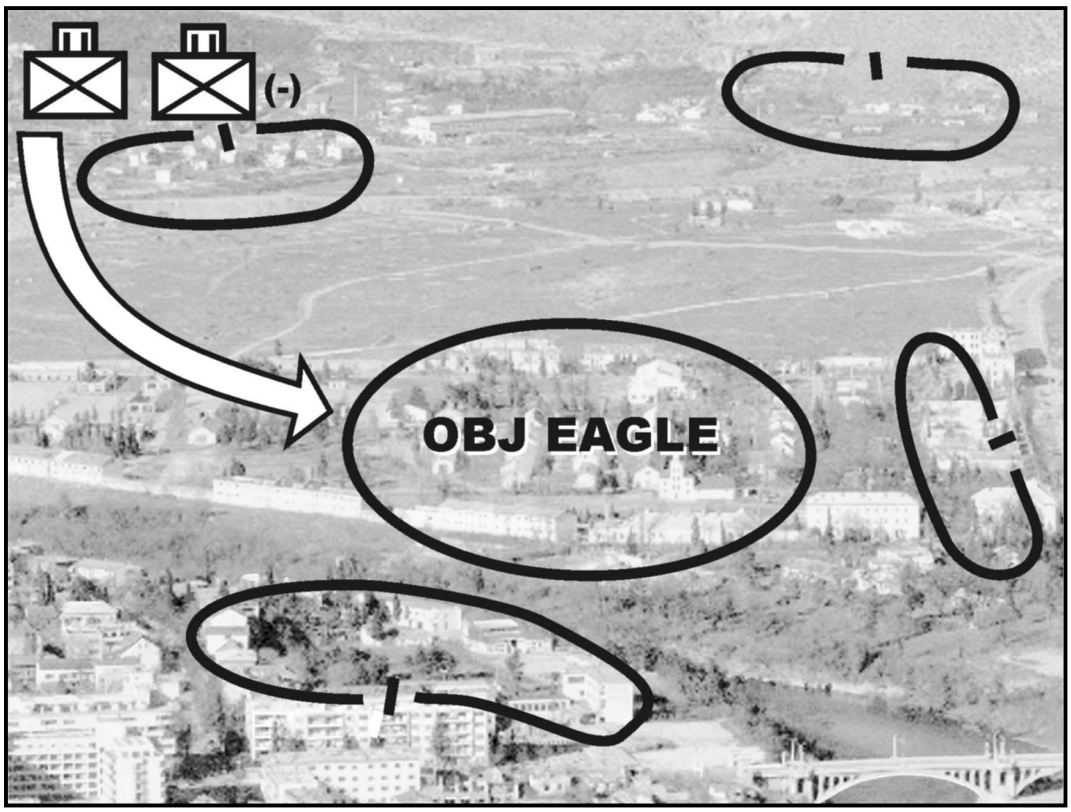

Figure G-6. Isolation of an urban area by an Infantry battalion using the cordon technique.

Note: Combat experience and recent rotations at the CTCs have shown that many casualties can be sustained when moving between buildings, down streets, and through open areas to enter a building either to gain a foothold or to clear it. One purpose of isolation at the company and battalion levels must be to dominate the area leading to the point(s) of entry to protect assaulting troops entering the building from effective enemy fire. This is accomplished by using direct and indirect fires and obscurants, maintaining situational understanding, and exercising tactical patience prior to movement.

(4) ***Secure a Foothold.*** Securing a foothold involves seizing an intermediate objective that provides cover from enemy fire and a location for attacking troops to enter the urban area. The size of the foothold is METT-TC dependent and is usually a company intermediate objective. In some cases a large building may be assigned as a company intermediate objective (foothold).

(a) As a company attacks to gain a foothold, it should be supported by suppressive fire and smoke. In the example shown in Figure G-7, the center TF conducts a supporting attack to seize OBJ DOG. (In the brigade scheme of maneuver, the TF on the left conducts the main attack to seize and clear OBJ CAT, and the TF on the right conducts a supporting attack to seize OBJ RAT. The seizure of OBJs RAT and DOG isolates OBJ CAT). In order to seize OBJ DOG the TF commander determined that two intermediate objectives were necessary.

(b) One company will secure a foothold in OBJ Y. As a follow-on mission, the same company will seize OBJ Z and support the battalion main effort by fire, or facilitate the passage of another company through OBJ Y to seize OBJ Z to support the battalion main effort by fire.

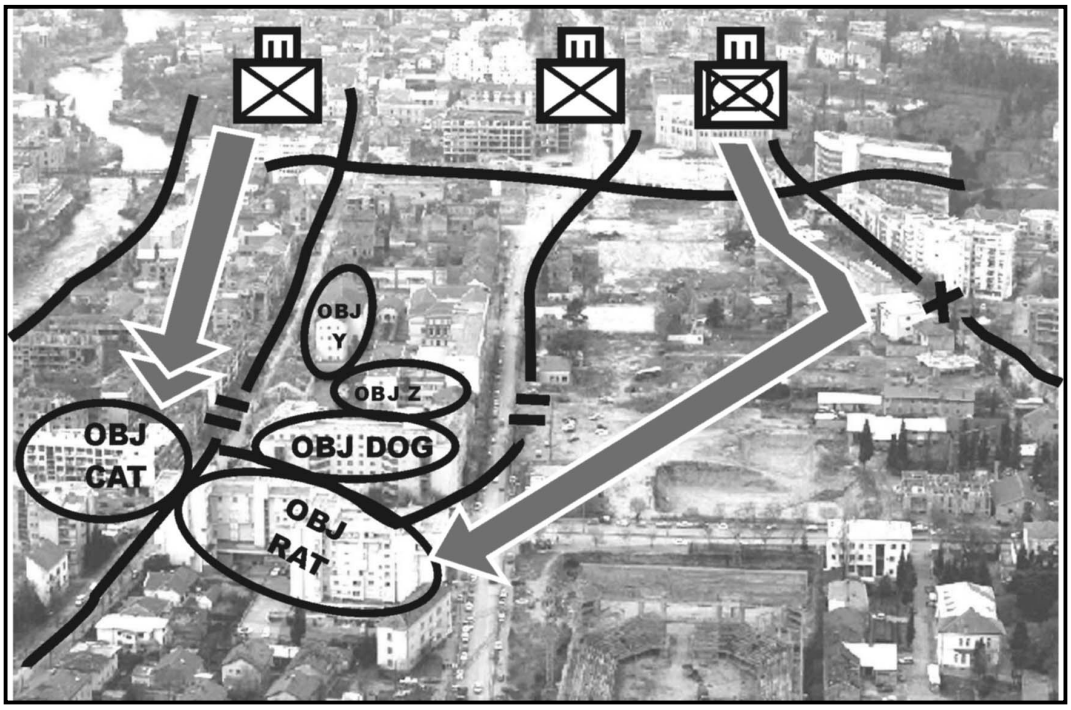

Figure G-7. Securing a foothold, battalion attack.

(5) ***Clear an Urban Area.*** Before determining to what extent the urban area must be cleared, the factors of METT-TC must be considered. The ROE will affect the TTP subordinate units select to move through the urban area and clear individual buildings and rooms. The commander may decide to clear only those parts necessary for the success of his mission if—

- An objective must be seized quickly.

- Enemy resistance is light or fragmented.
- The buildings in the area have large open areas between them. In this case, the commander would clear only those buildings along the approach to his objective, or only those buildings necessary for security.

An Infantry battalion may have a mission to systematically clear an area of all enemy. Through detailed analysis, the commander may anticipate that he will be opposed by strong, organized resistance or will be in areas having strongly constructed buildings close together. Companies may be assigned sectors within the battalion sector or AO in order to conduct systematic clearing (Figure G-8).

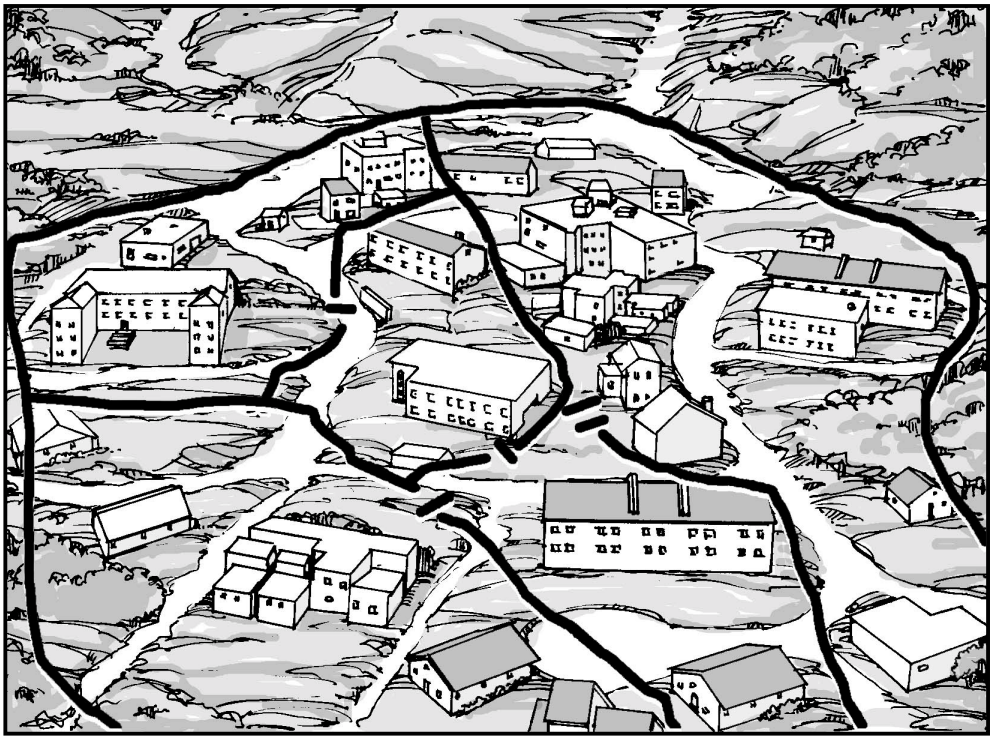

Figure G-8. Systematic clearance within assigned areas.

(6) ***Consolidate/Reorganize and Prepare for Future Missions.*** Consolidation occurs immediately after each action. Reorganization and preparation for future missions occurs after consolidation. Many of these actions occur simultaneously.

(a) Consolidation provides security and facilitates reorganization, and allows the battalion to prepare for counterattack. Rapid consolidation after an engagement is extremely important in an urban environment. The assault force in a cleared building must be quick to consolidate in order to repel enemy counterattacks and to prevent the enemy from infiltrating back into the cleared building. After securing a floor, selected members of the assault force are assigned to cover potential enemy counterattack routes to the building. Priority must be given to securing the direction of attack first.

(b) Reorganization actions (many occurring simultaneously) prepare the unit to continue the mission. The battalion prepares to continue the attack, prepares for future missions, and prepares for the possible transition to stability and support operations.

Note: Friendly force situational understanding is significantly improved in digitally equipped units through the use of Force XXI Battalion Command Brigade and Below (FBCB2) assets.

G-18. TRANSITION

During transition, the battalion continues to use all CS and CSS assets consistent with the mission end-state and ROE to move from offensive operations to stability and or support operations in order to return the urban area to civilian control. During this step, the roles and use of SOF, CS, and CSS units, such as civil affairs (CA), PSYOP, medical, and MPs, become more important with the requirements to maintain order and stabilize the urban area. These assets will normally support the battalion's transition efforts under brigade control. The battalion and other brigade units will consolidate, reorganize, conduct area protection and logistical missions, and prepare for follow-on missions. The battalion staff, in coordination with the brigade staff, must prepare to transition from being a "supported" force to being the "supporting" force.

G-19. MOVEMENT TO CONTACT

Figure G-9 depicts a movement to contact in an urban area using the search and attack technique. This technique is used when knowledge of the enemy is unclear and contact is required. It is normally employed against a weak enemy force that is disorganized and incapable of massing strength against the battalion; for example, urban insurgents or gangs. The battalion divides its portion of the AO into smaller areas and coordinates the movement of companies. The battalion can either assign sectors to specific companies or control movement of companies by sequential or alternate bounds within the battalion sector. In the example shown in Figure G-9, individual companies would find, fix, and finish the enemy (company sectors), or they would find and fix the enemy and the battalion would assign another company the task of finishing the enemy (sequential or alternate bounds). During a mission of this type, the urban environment makes finding, fixing, and finishing the enemy difficult for conventional Infantry forces. For example, movement of units may become canalized due to streets and urban "canyons" created by tall buildings. The application of fire power may become highly restricted based on the ROE. The use of HUMINT in this type of action becomes increasingly more important and can be of great assistance during the "find" portion of the mission.

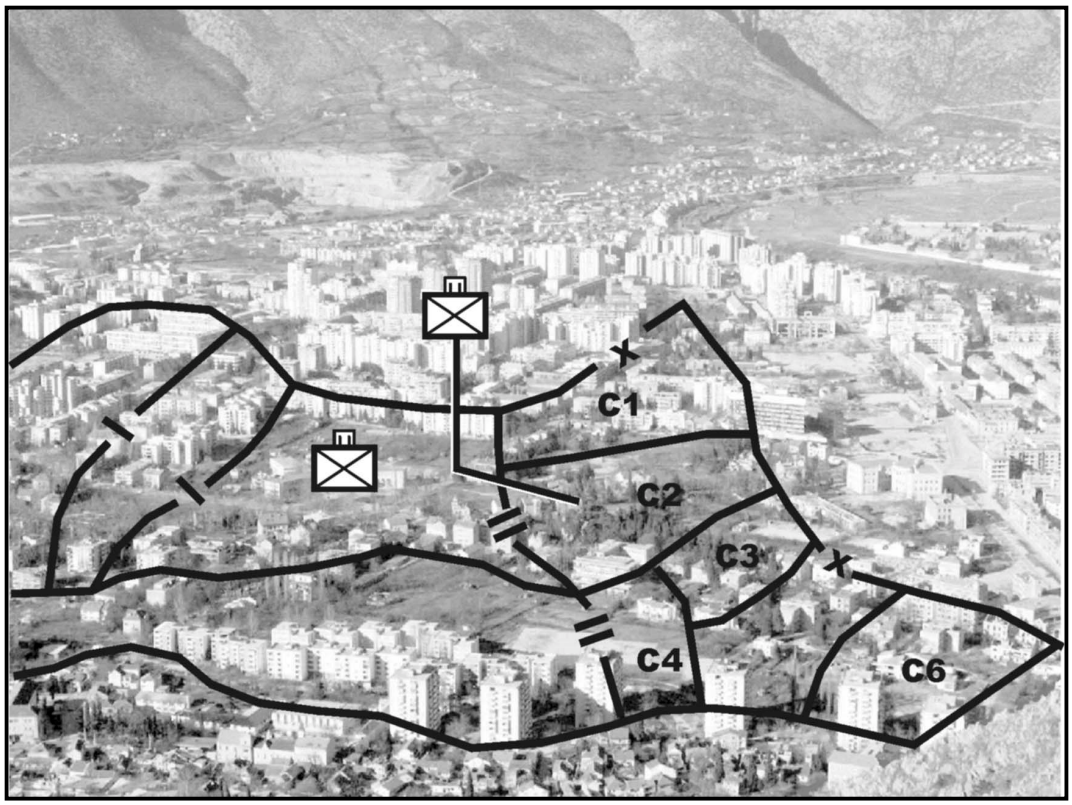

Figure G-9. Search and attack technique.

G-20. INFILTRATION

The following example describes the actions of an Infantry battalion conducting an infiltration. With some modification, it could also apply to a dismounted mechanized Infantry battalion.

a. The outskirts of an urban area may not be strongly defended. Its defenders may have only a series of antiarmor positions, security elements on the principal approach, or positions blocking the approaches to key features in the town. The strongpoints and reserves are deeper in the urban area.

b. A battalion may be able to seize a part of the urban area by infiltrating platoons and companies between those enemy positions on the outskirts. Moving by stealth on secondary streets by using the cover and concealment of back alleys and buildings, the battalion may be able to seize key street junctions or terrain features, to isolate enemy positions, and to help following units pass into the urban area. Such an infiltration should be performed when visibility is poor and no civilians are in the area.

c. The Infantry battalion is organized into infiltration companies with appropriate attachments and a reserve consistent with METT-TC. Each company should have an infiltration lane that allows stealthy infiltration by company or smaller size units. Depending on the construction of the urban area and streets, the infiltration lane may be 500 to 1,500 meters wide.

d. The infiltrating companies advance stealthily on foot using available cover and concealment. Mortar and artillery fire can be used to divert the enemy's attention and cover the sound of infiltrating troops.

e. Armored vehicles and antiarmor weapons are positioned to cover likely avenues of approach for enemy armored vehicles. The battalion commander may position antiarmor weapons to cover the likely avenues of approach, if no BFVs or tanks are available. The reconnaissance platoon and antiarmor company screen the battalion's more vulnerable flanks. Also, the antiarmor company can support by fire if the situation provides adequate support by fire positions.

f. As the companies move into the urban area, they secure their own flanks. Security elements may be dropped off along the route to warn of a flank attack. Engineers assist in breaching or bypassing minefields or obstacles encountered. Enemy positions are avoided but reported.

g. The infiltrating companies proceed until they reach their objective. At that time, they consolidate and reorganize and arrange for mutual support. They patrol to their front and flanks, and establish contact with each other. The company commander may establish a limit of advance to reduce chances of enemy contact or to ensure safety from friendly forces.

h. If the infiltration places the enemy in an untenable position and he must withdraw, the rest of the battalion is brought forward for the next phase of the operation. If the enemy does not withdraw, the battalion must clear the urban area before the next phase of the operation (Figure G-10).

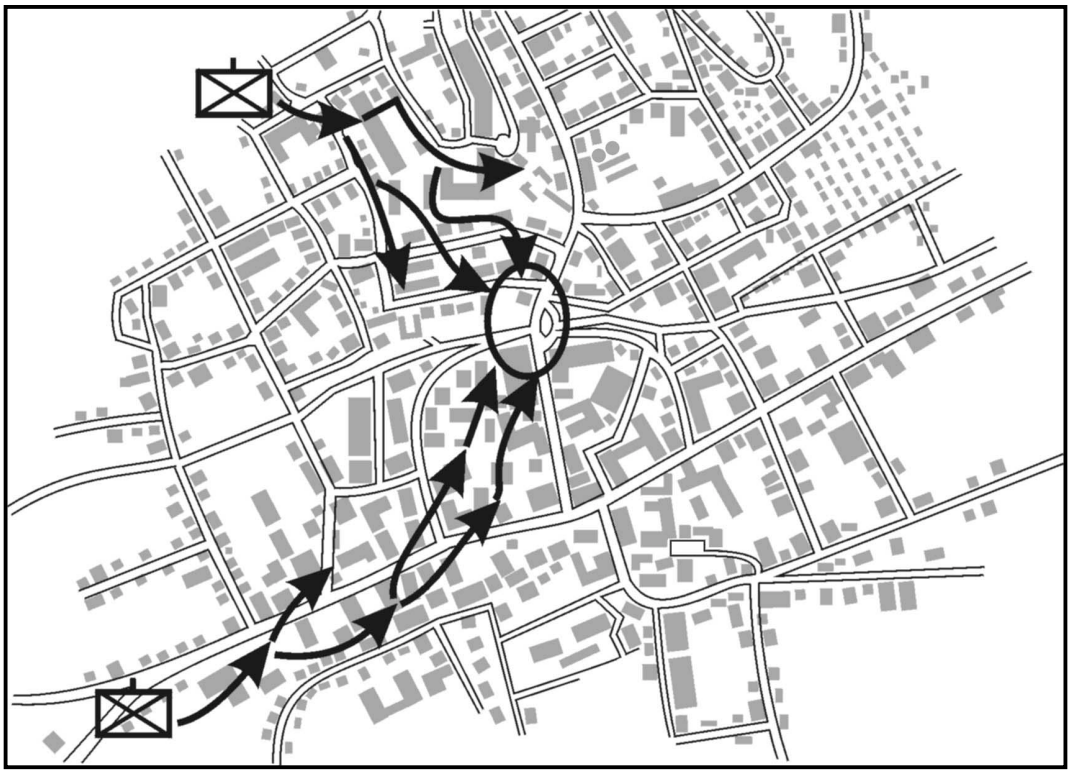

Figure G-10. Infiltration.

G-21. ATTACK OF A VILLAGE

The battalion may have to conduct either a hasty or deliberate attack of a village that is partially or completely surrounded by open terrain. (Figure G-11 depicts an Infantry battalion conducting such an attack.) After the factors of METT-TC have been considered, the tactical tasks discussed in paragraph G-17 are performed (specifically, reconnoiter the objective, move to the objective, isolate the objective, secure a foothold, clear the objective, and consolidate and reorganize and or prepare for future missions). In the example shown in Figure G-11, two companies and or company teams isolate the village, and a company team secures a foothold and enters and clears the village.

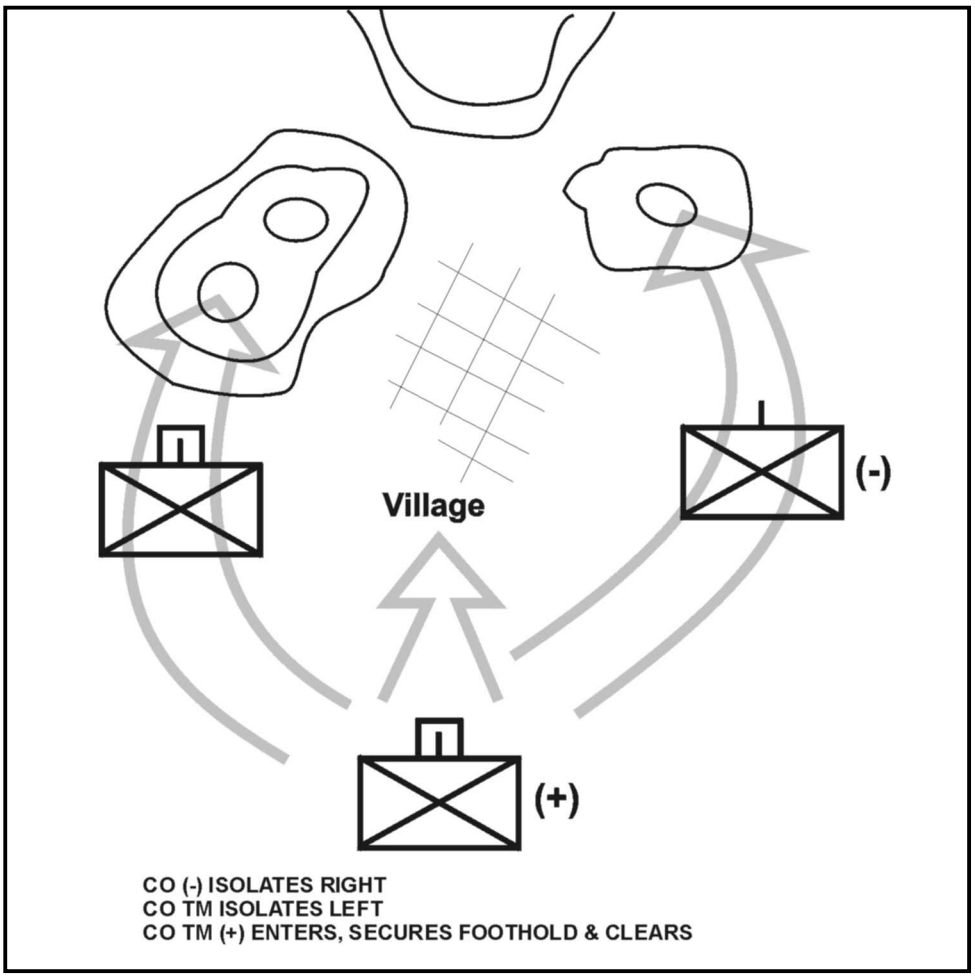

Figure G-11. Attack of a village.

G-22. NODAL ATTACK

The battalion may be given the mission to seize a key node(s) as part of a brigade operation. (See Figures G-12 and G-13.) In certain situations, the battalion may be required to seize nodes independently. This mission is characterized by rapid attacks followed by defensive operations. The enemy situation must permit the attacking force to

divide its forces and seize key nodes. Multiple attacks, as depicted in Figures G-12 and G-13, will require precise maneuver and supporting fires. This mission may be given to a battalion before an anticipated stability and or support operation, or to isolate an urban area for other units that will be conducting offensive operations inside the urban area. Figure G-12 depicts a brigade conducting multiple nodal attacks. Figure G-13 depicts a battalion TF executing its assigned mission. This technique is used to deny the enemy key infrastructure. Use of this technique may also require a designated rapid response element(s) in reserve in the event that enemy forces mass and quickly overwhelm an attacking battalion. Normally the reserve is planned at brigade level. Battalions executing a nodal attack independently will need to plan for a designated rapid response reserve element. The duration of this attack should not exceed the battalion's self-sustainment capability.

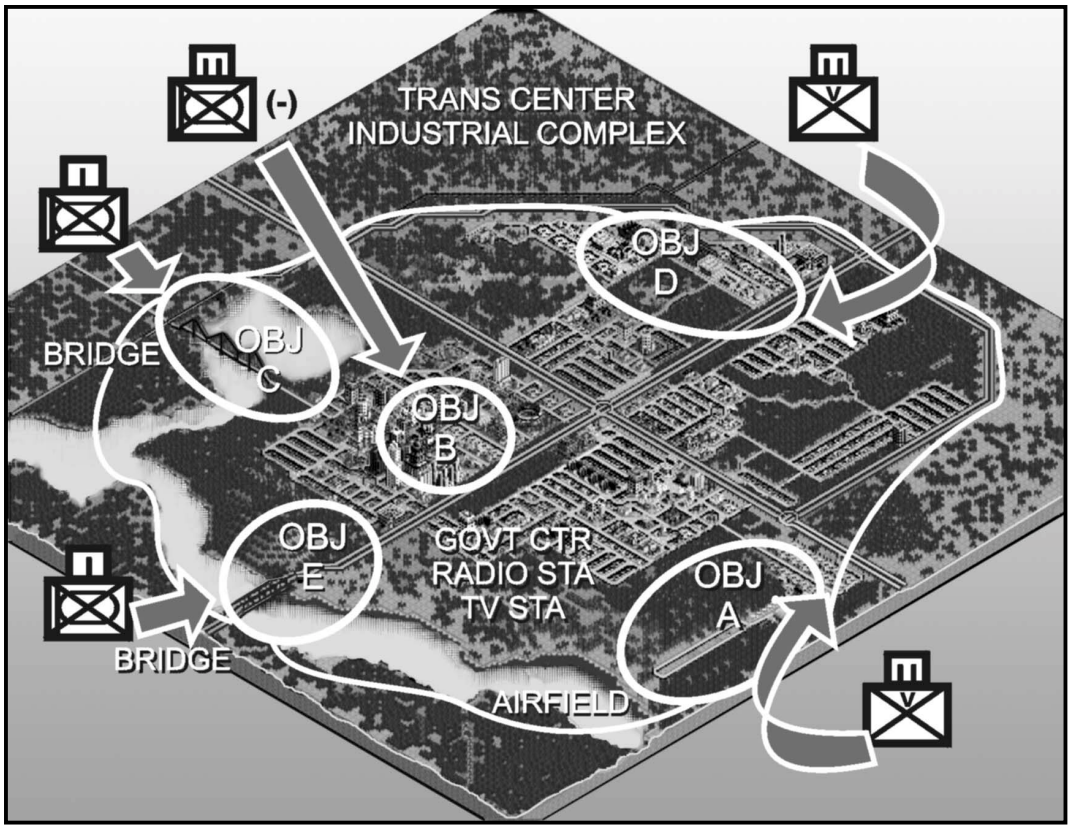

Figure G-12. Brigade scheme of maneuver, nodal attack.

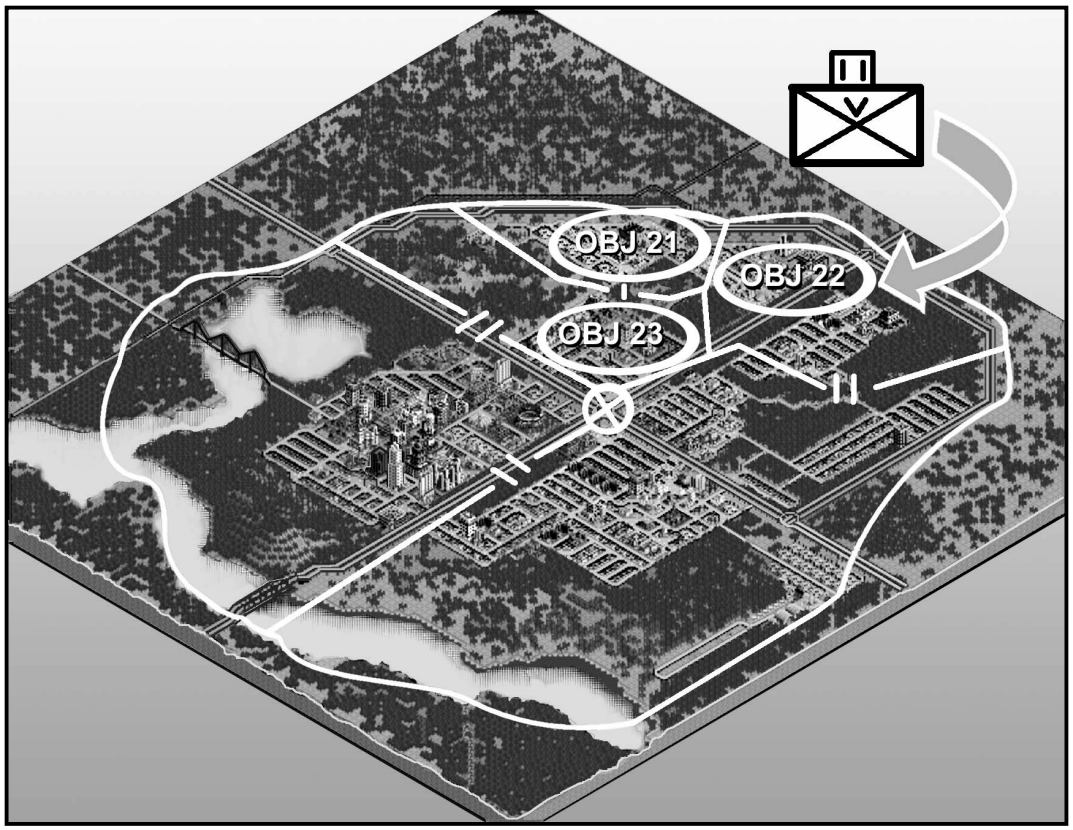

Figure G-13. Battalion nodal attack.

Section V. DEFENSIVE OPERATIONS

Of the two types of defense, area and mobile, the area defense will probably be the type most used since most of the reasons for defending an urban area are focused on retaining terrain. The mobile defense pattern is more focused on the enemy and the commander may decide to use it based on his estimate of the situation. In an urban area, the defender must take advantage of the abundant cover and concealment. He must also consider restrictions to the attacker's ability to maneuver and observe. By using the terrain and fighting from well-prepared and mutually supporting positions, a defending force can inflict heavy losses upon, delay, block, or fix a much larger attacking force. A commander must decide whether defending a urban area is needed to successfully complete his mission. Before making his decision, he should consider the issues discussed in this paragraph.

G-23. DEFENSIVE FRAMEWORK

Normally, the battalion will conduct defensive operations as part of a brigade. The brigade can conduct the full range of defensive operations within a single urban area or in an AO that contains several small towns and cities using the elements of the urban operational framework shown in Figure G-14. Similar to offensive operations, the brigade commander attempts to set the conditions for tactical success. Isolation of the

brigade by the enemy is avoided through security operations; defensive missions are assigned to subordinate battalion task forces in order to achieve the commander's intent and desired end-state; and then the brigade transitions to stability and or support actions. During urban defensive operations, the transition to stability and support operations may not be clear to the soldiers conducting the missions. Commanders must offset this tendency with clear mission-type orders and updated ROE. Again, as in offensive operations, the elements are not phases; they may occur simultaneously or sequentially. Well-planned and executed defensive operations will have all four elements present. During defensive operations the brigade commander seeks to:

- Avoid being isolated by the enemy.
- Defend key and decisive terrain, institutions, or infrastructure.
- Use offensive fire and maneuver to retain the initiative.

Battalions will conduct defensive operations by conducting counterreconnaissance missions and patrols (shaping/avoiding isolation); assigning battle positions or sectors to companies (dominating); and consolidating/reorganizing and preparing for follow-on missions (transitioning).

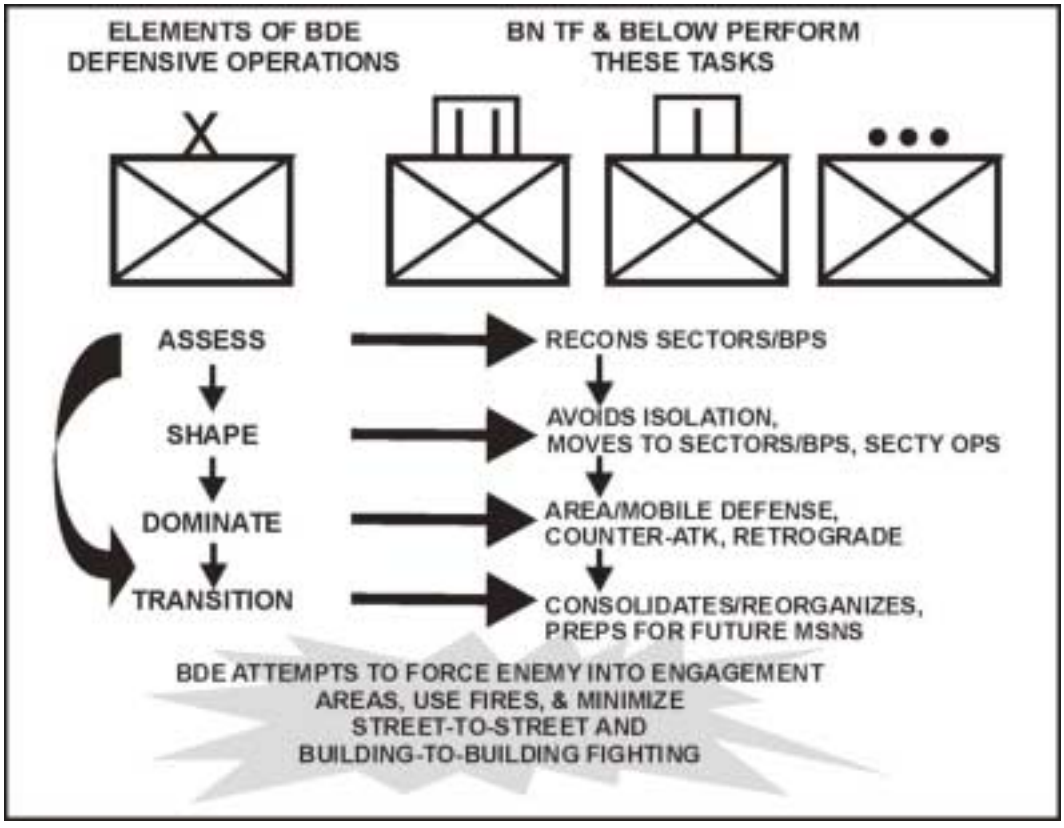

Figure G-14. Defensive urban operational framework.

G-24. DEFENSIVE PLANNING

In planning a defense in an urban area, the staff must identify the following:

- Positions and areas that must be controlled to prevent enemy infiltration.
- Sufficient covered and concealed routes for movement and repositioning of forces.
- Structures and areas that dominate the urban area.
- Areas, such as parks and broad streets, that provide fields of fire for tanks and antiarmor weapons.
- Areas to position artillery assets.
- C2 locations.
- Protected areas for CSS activities.
- Suitable structures that are defensible and provide protection for defenders.
- Contingency plans in the event that the battalion must conduct breakout operations.
- Plans for rapid reinforcement.

a. Battalions defending in urban areas must prepare their positions for all-round defense. Units must employ aggressive security operations that include surveillance of surface and subsurface approaches. Battalions must constantly patrol and use OPs and sensors to maintain effective security. Special measures must be taken to control possible civilian personnel who support the enemy or enemy combatants who have intermixed with the local population. Consideration must also be given to the protection of noncombatants that remain in the AO, and contingency actions in the event that the situation deteriorates and requires their evacuation.

b. Defensive fire support in urban operations must take advantage of the impact of indirect fires on the enemy before he enters the protection of the urban area. Fire support officers at all levels must coordinate and rehearse contingencies that are inherent to nonlinear fire support coordination measures and clearance of fires. Mutually supporting observation plans for daylight and periods of limited visibility must account for the degradation of lasers in well-lit urban areas. The fire support officer also plans and coordinates nonlethal capabilities for the brigade. Civil affairs and PSYOP assets should be coordinated with the appropriate command and control warfare/information operations headquarters.

G-25. INTEGRATING THE URBAN AREA INTO THE DEFENSE

The battalion may also integrate villages, strip areas, and small towns into the overall defense, based on higher headquarters' constraints and applicable ROE. (See Figure G-15.) A defense in an urban area, or one that incorporates urban areas, normally follows the same sequence of actions and is governed by the principles contained in Chapters 5 and 6. When defending on predominately urban areas, the battalion commander must consider that the terrain is more restrictive due to buildings that are normally close together. This usually requires a higher density of troops and smaller company sectors or battle positions than in open terrain.

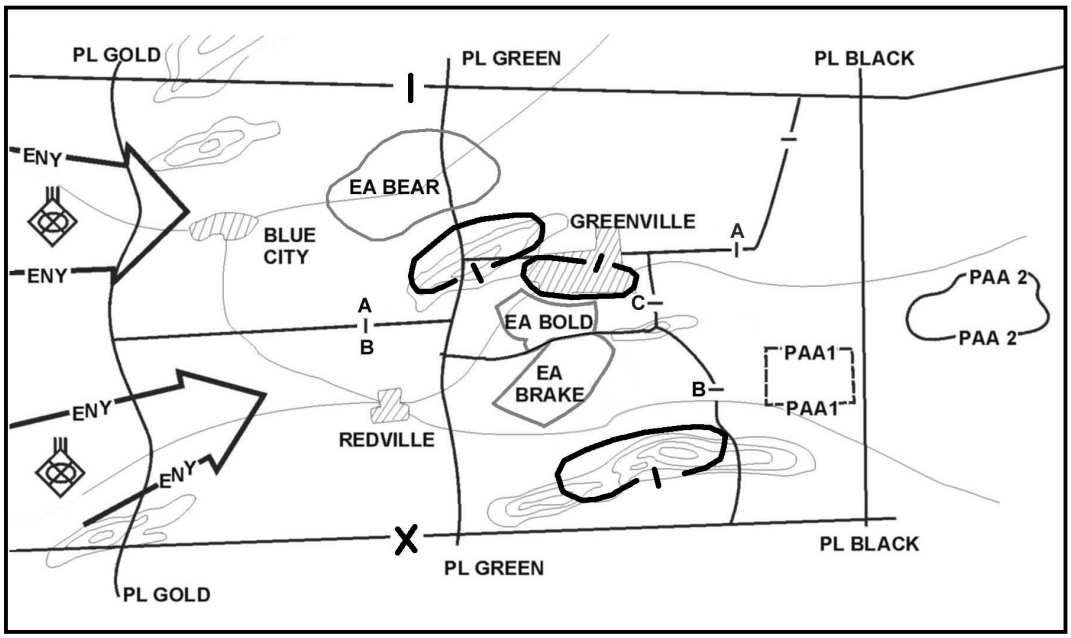

Figure G-15. Integrating urban areas into a defense.

G-26. NODAL DEFENSE

Figure G-16 depicts a transitional situation where the battalion moves from an offensive to a defensive or stability operation. The brigade mission may contain METT-TC factors that require varying defensive techniques by the subordinate battalions under the brigade's control. Figure G-17 depicts a nodal defense where battalions employ different defensive techniques in order to achieve the brigade commander's desired end-state. The brigade commander's intent is to safeguard the key nodes that were seized during the offensive action in order to eventually return the infrastructure of this particular urban area back to civilian control. A combination of sectors, battle positions, strong points, roadblocks, checkpoints, security patrols, and OPs could be employed within the TF sector or AO. Figure G-17 depicts the changed TF task organizations, the extended boundaries, and directed brigade OPs. Considerations in a situation such as this include:

a. **Task Organization.** Companies may have to be task organized differently to conduct the specific missions assigned by the battalion or TF commander. The task organization required for the defensive or stability operation will probably be different from the task organization used in an offensive operation.

b. **Symmetrical/Asymmetrical Threats.** The battalion or TF will likely respond to both symmetrical and asymmetrical threats within the area of operations. The defensive techniques chosen by subordinate companies should allow them to respond to the specific threats in their respective AOs, battle positions, or sectors.

c. **Boundary Changes.** Again, based on the commander's intent and the battalion's or TF's defensive scheme of maneuver, boundary changes may be required in order to give companies more or less maneuver space.

d. **ROE Modification.** The ROE may require modification based on the type of mission to be conducted. The ROE may become more or less restrictive based on METT-TC factors. Commanders and leaders must ensure that the ROE are clearly stated and widely disseminated at the beginning and conclusion of each day.

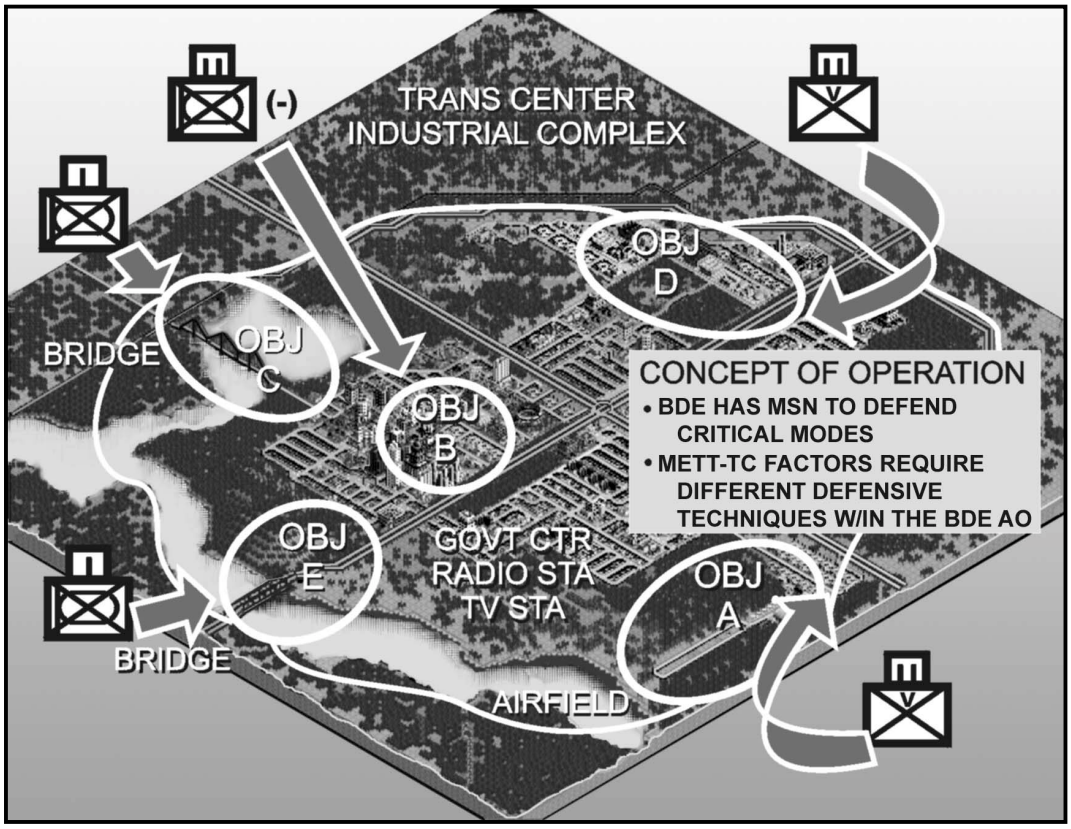

Figure G-16. Nodal defense, transitional situation.

Note: In Figure G-17 the northern TF defending the transportation center/industrial complex has decided to use a perimeter defense for inner security and has assigned the attached mechanized Infantry company the mission to conduct outer security by means of a screen and manning the designated brigade OP. Other TFs within the brigade AO may be required to use different defensive techniques.

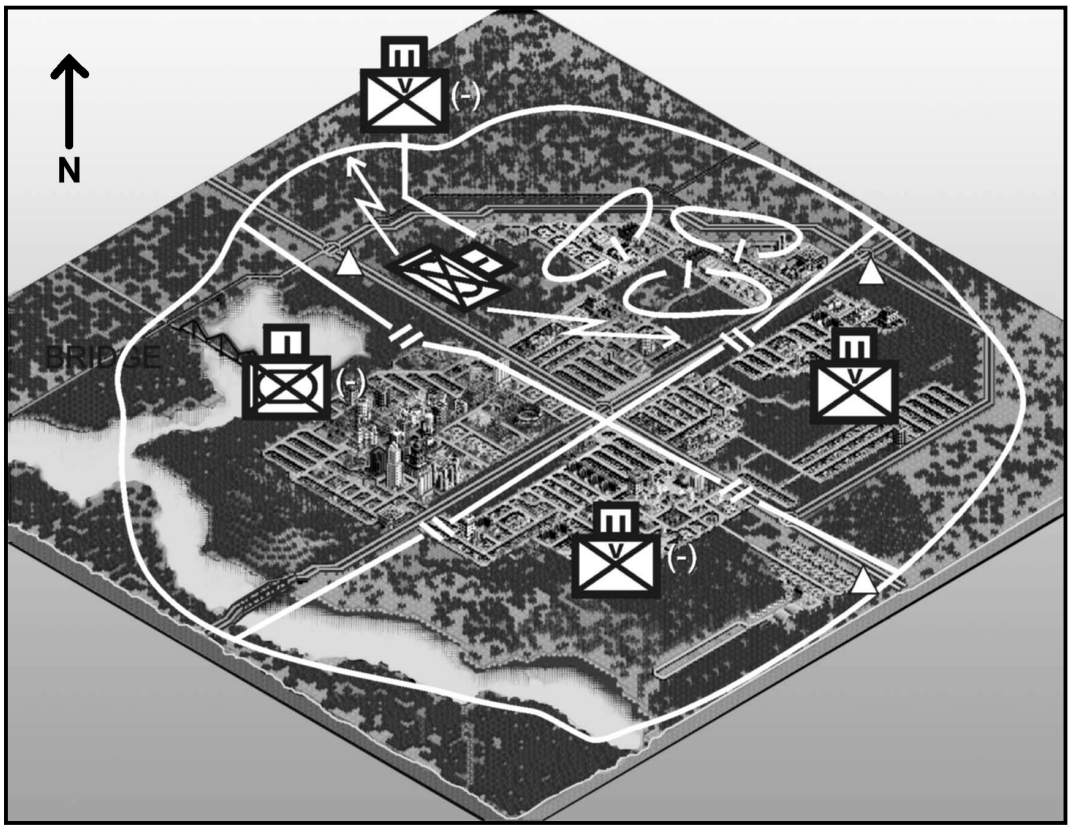

Figure G-17. Nodal defense, different defensive techniques.

Note: The digital force has the potential to provide accurate threat information that can enhance situational understanding, which facilitates targeting and obstacle placement. JSTARS; GUARDRAIL; unmanned aerial vehicles, if present; and other reconnaissance assets will significantly improve the threat situational understanding and targeting capability of the unit.

G-27. DELAY

The purpose of a delay is to slow the enemy, cause enemy casualties, and stop the enemy (where possible) without becoming decisively engaged or bypassed. The delay can be oriented either on the enemy or on specified terrain such as a key building or manufacturing complex.

a. **Ambushes and Battle Positions.** A delay in an urban area is conducted from a succession of ambushes and battle positions (Figure G-18). The width of the TF zone depends upon the amount of force available to control the area, the nature of the buildings and obstacles along the street and the length of time that the enemy must be delayed.

(1) ***Ambushes.*** Ambushes are planned on overwatching obstacles and are closely coordinated but they are executed at the lowest levels. The deployment of the TF is realigned at important cross streets. The ambushes can be combined with limited objective attacks on the enemy's flanks. These are usually effective in the edge of open

spaces, parks, wide streets, and so on. Tanks and BFVs should execute these along with dismounted Infantry.

(2) ***Battle Positions.*** Battle positions should be placed where heavy weapons, such as tanks, BFVs, antiarmor weapons, and machine guns, will have the best fields of fire. Such locations are normally found at major street intersections, parks, and at the edge of open residential areas. Battle positions should be carefully and deliberately prepared, reinforced by obstacles and demolished buildings, and supported by artillery and mortars. They should be positioned to inflict maximum losses on the enemy and cause him to deploy for a deliberate attack.

b. **Two Delaying Echelons.** The TF is most effective when deployed in two delaying echelons, alternating between conducting ambushes and fighting from battle positions. As the enemy threatens to overrun a battle position, the company disengages and delays back toward the next battle position. As the company passes through the company to the rear, it establishes another battle position. Smoke and demolitions are used to aid in the disengagement. Security elements on the flank can be employed to prevent the enemy from out-flanking the delaying force. A small reserve can be used to react to unexpected enemy action and to conduct continued attacks on the enemy's flank.

c. **Engineers.** The engineer effort should first be centralized to support the preparation of battle positions and then decentralized to support the force committed to ambush.

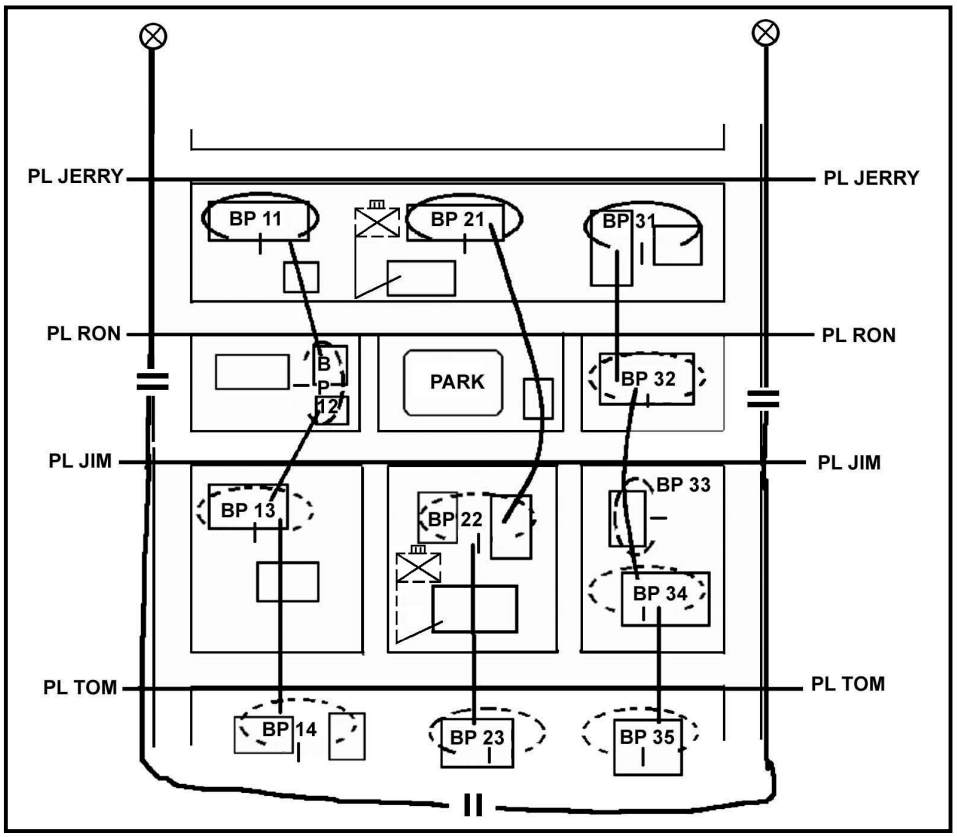

Figure G-18. Battalion delay in an urban area.

Section VI. STABILITY AND SUPPORT OPERATIONS

Infantry battalions may have to conduct operations in environments that do not involve traditional combat. A battalion may be called upon to conduct a stability or support contingency operation and then have to quickly transition into offensive or defensive operations. The Infantry battalion may also be utilized in a stability or support operation at the successful conclusion of a combat operation. When assigned a stability or support mission, a well-trained battalion must be able to rapidly shift its mission focus from war fighting to stability and support and also from stability and support to war fighting. During a stability or support operation, the Infantry battalion performs numerous missions and tasks not necessarily contained in its mission-essential task list (METL). Essentially, the battalion accomplishes these activities through execution of tactical missions and tasks. Although stability and support operations can occur anywhere, they will most likely occur in an urban environment. (See Appendix C and TC 7-98-1 for additional considerations and specific TTP.) (Definitions of stability and support operations and the types of those operations are included in this paragraph.)

G-28. STABILITY OPERATIONS

Stability operations encompass a range of actions that shape the strategic environment and respond to developing crises. The purposes of stability operations are to:

- Protect national interests.
- Promote peace or deter aggression.
- Satisfy treaty obligations or enforce agreements and policies.
- Reassure allies, friendly governments, and agencies.
- Encourage a weak or faltering government.
- Maintain or restore order.
- Protect life and property.
- Demonstrate resolve.
- Deter or respond to terrorism.
- Reduce the threat of conventional arms and WMD to regional security.
- Eliminate or contain subversion, lawlessness, and insurgency.

a. **Considerations for Stability Operations.** Conducting stability operations is fundamentally identical to conducting combat operations. While each stability operation is different, the military decision-making process (MDMP) and troop-leading procedures methodologies apply. The considerations listed below supplement those processes and can help the battalion commander and staff in developing tailored concepts and schemes of maneuver for stability operations.

- Leverage interagency, joint, and multinational cooperation.
- Enhance the capabilities and legitimacy of the host nation.
- Understand the potential for unintended consequences of individual and small unit actions.
- Display the capability to use force without threatening the population.
- Act decisively to prevent escalation.
- Apply force selectively and discriminately.
- Stress force protection.

- Emphasize information operations.

b. **Types of Stability Operations.** Table G-2 depicts the types of stability operations a battalion may be called upon to conduct and the missions it will issue its subordinate companies/company teams in order to execute its stability operation(s).

TYPE	MISSIONS
Peace Operations	***Peacekeeping*:** employ patrols, establish checkpoints, roadblocks, buffer zones, supervise truce, EPW exchange, reporting and monitoring, negotiation and mediation, liaison, investigation of complaints and violations, civil disturbance missions, and offensive and defensive missions. ***Peace Enforcement*:** separate belligerents; establish and supervise protected zones, sanction enforcement, movement denial and guarantee, restoration and maintenance of order, area security, humanitarian assistance, civil disturbance missions, and offensive and defensive missions. ***Operations in Support of Diplomatic Efforts*:** conduct military-to-military contacts, conduct exercises, provide security assistance, restore civil authority, rebuild physical infrastructure, provide structures and training for schools and hospitals, and reestablish commerce.
Foreign Internal Defense	***Indirect Support*:** military-to-military contacts, exercises, area security. ***Direct Support*:** civil-military operations, intelligence and communications sharing, and logistical support. ***Combat Operations*:** offensive and defensive missions.
Support to Insurgencies	Show of force, defensive missions, raids, area security, employ patrols, and provide CSS.
Counterdrug Operations	Liaison and advisor duty, civic action, intelligence support, surveillance support, reconnaissance, logistical support, and information support.
Combating Terrorism	Conduct force protection, offensive and defensive missions.
Noncombatant Evacuation Operations	Attack to seize terrain that secures evacuees or departure area, guard, convoy security, delay, and defend. (See FM 90-29.)
Arms Control	Seize and destroy weapons, convoy escort, assist and monitor inspection of arms, and conduct surveillance.
Show of Force	Perform tactical movement, demonstration, defensive operations, and perform training exercises.

Table G-2. Types of stability operations, missions.

G-29. SUPPORT OPERATIONS

Support operations provide essential supplies and services to assist designated groups. They are conducted to help foreign and civil authorities respond to crises. Battalions conduct support operations to save or protect lives, reduce suffering, recover essential infrastructure, improve the quality of life, and restore situations to normal. Again, planning for support operations is fundamentally identical to planning for combat and stability operations. While each support operation is different, the military decision-making process and troop-leading procedures methodologies apply. Considerations that can assist the brigade commander and staff in developing plans for support operations are:

- Provide essential support to the largest number of people.
- Coordinate actions with other agencies.
- Establish measures of effectiveness.
- Hand over to civilian agencies as soon as feasible.
- Conduct robust information operations.
- Secure the force.

a. **Types of Support Operations.** The two types of support operations that battalions will conduct are domestic support operations (DSO) and foreign humanitarian

assistance (FHA). Battalions conduct DSO in the U.S. and its territories and FHA outside the U.S. and its territories. Battalions normally conduct stand-alone FHA operations only in a permissive environment. In uncertain and hostile environments, battalions conduct FHA operations as part of larger stability or offensive and defensive operations.

b. **Forms of Support Operations.** During DSO, battalions perform relief operations, provide support to incidents involving WMD, provide support to law enforcement, and provide community assistance. In FHA, battalions most often conduct relief operations; however, FHA may also involve support to incidents involving WMD and community assistance. Missions and tasks assigned to subordinate companies/company teams often overlap during the conduct of support operations. Table G-3 depicts the more common missions that will be assigned to subordinate companies/company teams.

FORMS OF SUPPORT OPERATIONS	MISSIONS
Relief Operations	Search and rescue, food & water distribution, providing temporary shelter, transportation support, medical support, sanitation, area security.
Support to Incidents Involving WMD	Assisting law enforcement, area security, protection of critical assets (utilities, transportation, banking, telecommunications), responding to WMD casualties, establishing roadblocks/checkpoints.
Support to Civil Law Enforcement	Civil disturbance missions; support to counterterrorism and counterdrug operations; providing resources, training, and augmentation; assisting with cordon and search; security patrols; establish roadblocks and checkpoints.
Community Assistance	Search and rescue, firefighting, assistance in safety and traffic control, emergency snow removal, providing temporary shelter.

Table G-3. Types of support operations, missions.

c. **Other Agencies.** Support operations rely on a partnership with other government and nongovernment organizations. Liaison with these agencies and between local governments is critical. Regardless of the positive relationships built, force protection always remains a top priority.

G-30. TRANSITION TO COMBAT OPERATIONS

Stability, and to a lesser extent, support operations are missions that may transition to combat. An escalation to combat is a clear indicator that the peace operation failed. The battalion must always retain the ability to conduct offensive and defensive operations. Preserving the ability to transition allows the battalion to maintain initiative while providing force protection.

a. **Perception of Power.** The knowledge that the battalion is a viable presence because of the combat power it possesses must be coupled with the perception that it will employ its power if necessary. This perception is the primary means by which the battalions deter escalation to hostile action. The commander must plan for contingency operations that factor in what actions companies will perform if combat cannot be averted. In addition, how the battalion is task organized and how the AO is designed must support an expeditious transition.

b. **Balanced Mindset.** Soldiers must be able to properly adjust and balance the mindset of peace operations and the mindset of war fighting. Soldiers cannot become too

complacent in their warrior spirit, but also must not be too eager to rely on the use of force to resolve conflict. This balance is the essence of peace operations and the fundamental aspect that will enable the Infantry battalion to perform its mission successfully and avoid an escalation to combat.

c. **Combat Skills Training.** If the stability or support operation extends over prolonged periods of time, training should be planned that focuses on the individual and collective combat tasks that would be performed during transition to offensive and or defensive missions.

Section VII. OTHER ASSETS

Lessons learned from recent operations in urban areas have clearly demonstrated the value of the fully integrated combined arms team. Urban combat never should be considered a pure Infantry task. Urban combat by units composed entirely of Infantrymen is a historical anomaly. Across the spectrum of combat action in urban areas, powerful combined arms teams produce the best results. Infantry units operating alone suffer from critical shortcomings that can be compensated for only by appropriate task organization with mechanized Infantry, armor, and engineers. These teams must be supported by closely integrated aviation, fire support, communications, and logistical elements. This paragraph discusses the more common combat support assets available to the Infantry battalion for the execution of UO.

G-31. ARMORED VEHICLES

The capabilities, limitations, and employment of armored vehicles are discussed in the following paragraphs. (See Appendix D, Section IV for additional considerations and TTP.)

a. **Capabilities.** Some of the capabilities of armored vehicles are:

(1) The thermal sights on armored vehicles can detect enemy activity through darkness and smoke, conditions that limit even the best-equipped Infantry. They also provide greater range (4,000+ meters) in most instances.

(2) Armored vehicles can deliver devastating fires; are fully protected against antipersonnel mines, fragments, and small arms; and have excellent mobility along unblocked routes.

(3) Armored vehicles project a psychological presence, an aura of invulnerability that aids the friendly forces in deterring violence. Mounted patrols by armored vehicles can monitor large areas of a city while making their presence known to the entire populace, both friendly and unfriendly.

(4) BFVs can move Infantrymen rapidly to points where, together, they can dominate and isolate the cordoned area. Armored vehicles can also support troop convoy movements in wheeled vehicles. With their long-range sights and weapons, armored vehicles can dominate large expanses of open area and thus free Infantry to isolate closer terrain and visual dead space.

(5) The mobile protected firepower of armored vehicles can be used to add security to resupply convoys and to extract wounded personnel under fire. The armored vehicle's smoke grenade launcher capability can aid this and other small-unit actions.

b. **Limitations.** Some of the limitations of armored vehicles are:

(1) Armored vehicle vision blocks provide the crewman with poor all-round vision. Smoke or dust easily blinds crewmen. Tanks cannot depress their main gun enough to engage targets at very close range to the vehicle or elevate it to engage targets in tall buildings.

(2) If isolated or unsupported by Infantry, armored vehicles are vulnerable to enemy hunter/killer teams firing light and medium antiarmor weapons. Because of the abundance of cover and concealment in urban terrain, armored vehicle gunners may not be able to easily identify enemy targets unless the commander exposes himself to fire by opening his hatch or Infantrymen direct the gunner to the target.

(3) Armored vehicles are noisy. Therefore, there is little chance of them arriving in an area undetected. Improvised barricades, narrow streets and alleyways, or large amounts of rubble can block armored vehicles.

(4) Due to the length of the tank main gun, the turret will not rotate if a solid object is encountered; for example, a wall, post, and so forth. Heavy fires from armored vehicles cause unwanted collateral damage or can destabilize basic structures.

(5) The main gun of an M1A1 can only elevate (+)20 degrees and depress (–)9 degrees. Examples of standoff distances for buildings where a HEAT round is used are:

- Ground floor - 2.5 meters from the target.
- 3d story - 23 meters from the target.
- 18th story - 132 meters from the target.

Note: Figure G-19 shows the difference in the capabilities of the BFV and the M1 tank with regard to fields of fire on urban terrain. Note that the BFV can engage a target 9 to 10 stories high at 20 meters, whereas an M1 tank requires 90 meters. While the tank main gun has these limitations, targets can be engaged by the M2HB and M240 machine guns that are part of the tank's weapon system.

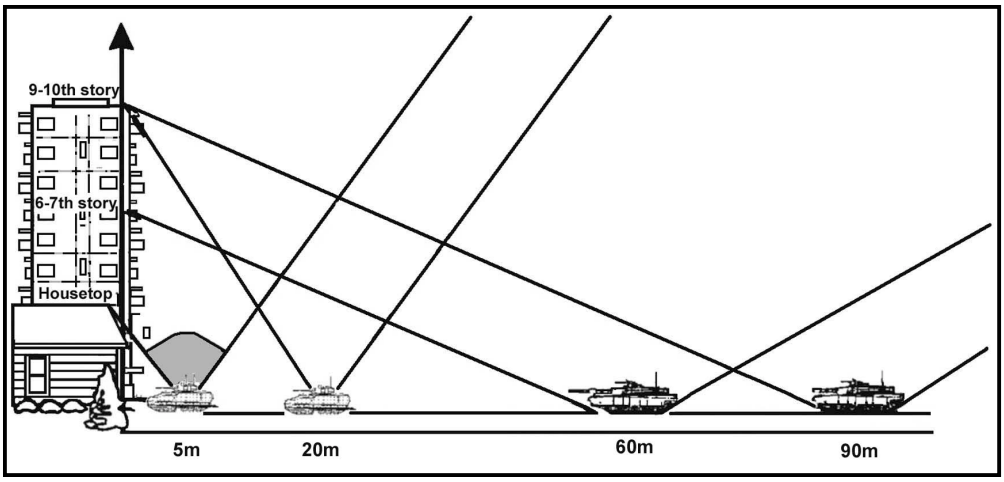

Figure G-19. Fields of fire on urban terrain.

c. **Employment.** Armored vehicles can support Infantry during urban combat operations by:

- Providing shock action and firepower.

- Isolating objectives with direct fire to prevent enemy withdrawal, reinforcement, or counterattack.
- Neutralizing or suppressing enemy positions with smoke, high explosive (HE), and automatic weapons fire as Infantry closes with and destroys the enemy.
- Assisting opposed entry of Infantry into buildings when doorways are blocked by debris, obstacles, or enemy fire.
- Smashing through street barricades or reducing barricades by fire.
- Obscuring enemy observation using on-board smoke generators.
- Holding cleared portions of the objective by covering avenues of approach.
- Attacking by fire any other targets designated by the Infantry.
- Establishing roadblocks or checkpoints.
- Suppressing identified sniper positions.

G-32. ENGINEERS

Normally an engineer platoon will be attached to an Infantry battalion. In some situations, additional engineers may be attached or OPCON to the battalion depending on the mission that it may have to conduct. For example, a battalion that has a requirement to conduct numerous explosive breaches as the main effort for a brigade attack may receive additional engineer units.

a. **Offensive Missions.** Engineers may perform the following missions during offensive operations in an urban area:

- Conduct a technical reconnaissance to determine the location and type of enemy obstacles and minefields, and to make breaching recommendations.
- Clear barricades and heavy rubble with earth-moving equipment or explosives to assist forward movement.
- Use explosives to destroy fortifications and strongpoints that cannot be reduced with the maneuver unit's organic assets.
- Use the engineer equipment, if available, to destroy structures or to clear rubble.
- Lay mines to protect flanks and rear areas.
- Conduct mobility operations (gap crossing).
- Locate and remove mines that may hamper the unit's movement.
- Conduct breaching operations.
- Conduct route reconnaissance.

b. **Defensive Missions.** Engineers may perform the following missions during the defense of an urban area:

- Construct complex obstacle systems.
- Rubble buildings.
- Lay mines.
- Develop and provide mine/obstacle overlay to leaders.
- Assist in the preparation of defensive positions and strongpoints.
- Maintain counterattack, communications, and resupply routes.
- Enhance movement between buildings, catwalks, bridges, and so on.
- Crater roads.

- Clear fields of fire.
- Fight as Infantry, when needed.

c. **Defense Against Armor**. In defensive situations, when opposed by an armor-heavy enemy, priority should be given to the construction of antiarmor obstacles throughout the urban area. Use of local materials, where possible, makes obstacle construction easier and reduces logistics requirements. Streets should be barricaded in front of defensive positions at the effective range of antitank weapons. These weapons are used to increase the destruction by antiarmor fires, to separate enemy Infantry from their supporting tanks, and to assist in the delay and destruction of the attacker. Antitank mines in and around obstacles and covered by fires help synchronize a defensive fire plan.

G-33. FIELD ARTILLERY

Appropriate fire support coordination measures should be carefully considered since fighting in urban areas results in opposing forces fighting in close combat. When planning for fire support in an urban area, the battalion S3 and FSO should consider the following:

a. Target acquisition may be more difficult because of the increased cover and concealment afforded by the terrain. Ground observation is limited in urban areas, therefore FOs should be placed high. Adjusting fires is difficult since buildings block the view of adjusting rounds; therefore, the lateral method of adjustment may be most useful.

b. Initial rounds are adjusted laterally until a round impacts on the street perpendicular to the FEBA. Airburst rounds are best for this adjustment. The adjustments must be made by sound. When rounds impact on the perpendicular street, they are adjusted for range. When the range is correct, a lateral shift is made onto the target and the gunner fires for effect.

c. Special consideration must be given to shell and fuze combinations when effects of munitions are limited by buildings.

- Careful use of VT is required to avoid premature arming.
- Indirect fires may create unwanted rubble and collateral damage.
- The close proximity of enemy and friendly troops requires careful coordination.
- WP may create unwanted fires and smoke.
- Fuze delay should be used to penetrate fortifications.
- Illumination rounds can be effective; however, friendly positions should remain in shadows and enemy positions should be highlighted. Tall buildings may mask the effects of illumination rounds.
- VT, TI, and ICM are effective for clearing enemy positions, observers, and antennas off rooftops.
- Swirling winds may degrade smoke operations.
- Scatterable mines (SCATMINE) may be used to impede enemy movements. SCATMINE effectiveness is reduced when delivered on a hard surface.

d. Target acquisition is difficult in urban terrain because the enemy has many covered and concealed positions and movement lanes. The enemy may be on rooftops and in buildings, and may use sewer and subway systems. Aerial observers are extremely valuable for targeting because they can see deep to detect movements, positions on

rooftops, and fortifications. Targets should be planned on rooftops to clear away enemy FOs as well as communications and radar equipment. Targets should also be planned on major roads, at road intersections, and on known or likely enemy positions. Employing artillery in the direct fire mode to destroy fortifications should be considered, especially when assaulting well prepared enemy positions. Also, restrictive fire support coordination measures, such as a restrictive fire area or no-fire area may be imposed to protect civilians and critical installations.

e. Self-propelled howitzers, 155-mm, are effective in neutralizing concrete targets with direct fire. Concrete-piercing 155-mm rounds can penetrate 36 inches of concrete at ranges up to 2,200 meters. The mounted .50-caliber machine gun can also be used as direct fire support. This howitzer must be closely protected by Infantry when used in the direct-fire mode, since the howitzers do not have any significant protection for their crews.

f. Forward observers must be able to determine where and how large the dead spaces are. This area is a safe haven for the enemy because he is protected from indirect fires. For low-angle artillery, the dead space is about five times the height of the building. For high-angle artillery, the dead space is about one-half the height of the building.

g. Aerial observers are effective for seeing behind buildings immediately to the front of friendly forces. They are extremely helpful when using the ladder method of adjustment because they may actually see the adjusting rounds impact behind buildings. Aerial observers can also relay calls for fire when communications are degraded due to power lines or masking by buildings.

h. Radar can locate many artillery and mortar targets in an urban environment because of the high percentage of high-angle fires. If radar is sited too close behind tall buildings, some effectiveness will be lost.

i. The use of airburst fires is an effective means of clearing snipers from rooftops. HE shells with delay fuzes may be effective against enemy troops in the upper floors of buildings, but, due to the overhead cover provided by the building, such shells have little effect on the enemy in the lower floors.

G-34. MORTARS

Mortars are well-suited for combat in urban areas because of their high rate of fire, steep angle of fall, and short minimum range. The battalion commander and S3 must plan mortar support in conjunction with the FSO as part of the total fire support system. (See FM 7-90 for detailed information on the tactical employment of mortars.)

a. **Role of Mortar Units.** The role of mortar units is to deliver suppressive fires to support maneuver, especially against dismounted Infantry. Mortars can be used to obscure, neutralize, suppress, or provide illumination during urban operations. Mortar fires inhibit enemy fires and movement, allowing friendly forces to maneuver to a position of advantage. The most common and valuable use for mortars is often harassment and interdiction fires. One of their greatest contributions is interdicting supplies, evacuation efforts, and reinforcement in the enemy rear just behind his forward defensive positions. During both World War II and Middle East conflicts, light mortar HE fires have been used extensively during urban combat to deny the use of streets, parks, and plazas to enemy personnel. Finally, mortars can be used, with some

limitations, against light armor and structures. Effectively integrating mortar fires with dismounted maneuver is key to successful combat in an urban area.

b. **Position Selection.** The selection of mortar positions depends on the size of buildings, the size of the urban area, and the mission. Rubble can be used to construct a parapet for firing positions. Positions are also selected to minimize counterbattery fire.

(1) ***Existing Structures and Masking.*** The use of existing structures (for example, garages, office buildings, or highway overpasses) for positions is recommended to afford maximum protection and minimize the camouflage effort. Proper masking can enhance survivability. If the mortar has to fire in excess of 885 mils to clear a frontal mask, the enemy counter-battery threat is reduced. These principles can be used in both the offense and the defense.

(2) ***Use of Sandbags.*** Mortars should not be mounted directly on concrete; however, sandbags may be used as a buffer. Sandbags should consist of two or three layers; be butted against a curb or wall; and extend at least one sandbag width beyond the baseplate.

(3) ***Placement.*** Mortars are usually not placed on top of buildings because lack of cover and mask makes them vulnerable. They should not be placed inside buildings with damaged roofs unless the structure's stability has been checked. Overpressure can injure personnel, and the shock on the floor can weaken or collapse the structure.

c. **Communications.** Initially, radio may be the primary means of communication during urban combat. An increased use of wire, messenger, and visual signals will be required. However, wire should eventually be the primary means of communication between the forward observers, fire support team, fire direction center, and mortars since elements are close to each other. Also, FM radio transmissions in urban areas are likely to be erratic. Structures reduce radio ranges; however, placing antennas on upper floors or roofs may improve communications and enhance operator survivability. Another technique that applies is the use of radio retransmissions. A practical solution is to use existing civilian systems to supplement the unit's capability, understanding that this is an unsecure method of communication.

d. **Magnetic Interference.** In an urban environment, all magnetic instruments are affected by surrounding structural steel, electrical cables, and automobiles. Minimum distance guidelines for the use of the M2 aiming circle (FM 23-90) will be difficult to apply. To overcome this problem, an azimuth is obtained to a distant aiming point. From this azimuth, the back azimuth of the direction of fire is subtracted. The difference is indexed on the red scale and the gun manipulated until the vertical cross hair of the sight is on the aiming point. Such features as the direction of a street may be used instead of a distant aiming point.

e. **High-Explosive Ammunition.** During urban combat, mortar HE fires are used more than any other type of indirect fire weapon. Although mortar fires are often targeted against roads and other open areas, the natural dispersion of indirect fires will result in many hits on buildings. Leaders must use care when planning mortar fires during MOUT to minimize collateral damage.

(1) High-explosive ammunition, especially the 120-mm projectile, provides good results when used against lightly built structures within cities. However, it does not perform well against reinforced concrete found in larger urban areas.

(2) When using HE ammunition in urban fighting, only point detonating fuzes should be used. The use of proximity fuzes should normally be avoided, because the nature of

urban areas causes proximity fuzes to function prematurely. Proximity fuzes, however, are useful in attacking some targets such as OPs on tops of buildings.

f. **Illumination.** Based on the close nature of urban combat, consideration should be given to the use of infrared (IR) illumination if the factors of METT-TC permit its use and friendly forces have a technological advantage over the enemy in terms of night vision devices (NVDs). Both IR and standard illumination rounds may cause unwanted urban fires if they come in contact with flammable structures or materials. Planning considerations must also include building height and the probability of rounds drifting and making contact with the sides of buildings, thus reducing their effectiveness. In some cases, ground burst may be more advantageous. In the offense, illumination rounds are planned to burst above the objective. If the illumination were behind the objective, the enemy troops would be in the shadows rather than in the light. In the defense, illumination is planned to burst behind friendly troops to put them in the shadows and place the enemy troops in the light. Buildings reduce the effectiveness of the illumination by creating shadows. Continuous illumination requires close coordination between the FO and FDC to produce the proper effect by bringing the illumination over the defensive positions as the enemy troops approach the buildings.

g. **Special Considerations.** When planning the use of mortars, commanders must consider the following:

(1) FOs should be positioned where they can get the maximum observation so target acquisition and adjustments in fire can best be accomplished. This is not necessarily on tops of buildings

(2) Commanders must understand ammunition effects to correctly estimate the number of volleys needed for the specific target coverage. Also, the effects of using WP or RP may create unwanted smoke screens or limited visibility conditions that could interfere with the tactical plan and may cause unwanted structural fires.

(3) FOs must be able to determine dead space in urban terrain. Dead space is the area in which indirect fires cannot reach the street level because of buildings. This area is a safe haven for the enemy. For mortars, the dead space is about one-half the height of the building.

(4) Mortar crews should plan to provide their own security.

(5) Commanders must give special consideration to where and when mortars are to displace while providing immediate indirect fires to support the overall tactical plan. Combat in urban areas adversely affects the ability of mortars to displace because of rubbling and the close nature of urban combat.

G-35. HELICOPTER SUPPORT

Infantry units may be supported by attack helicopters and assault and lift helicopters.

a. **Attack Helicopters**. Infantry units may be supported by a variety of attack helicopters ranging from fully modernized AH-64s to lightly armed but agile OH-58Ds. Regardless of the specific type of attack helicopter available, the same missions and tasks can be accomplished due to the inherent flexibility of Army aviation units. Due to the increased risk of small arms and man-portable air defense systems (MANPADS) engagements, aviation forces normally support UO by operating away from urban areas (such as isolation of objective); however, if the payoff is higher than the associated risk, aviation forces can be employed in and around the urban area.

(1) ***Common Missions.*** The most common missions assigned to attack helicopters during urban operations are:

- Escort of troop-carrying aircraft during air assaults.
- Overwatch and support attacks integrated with the ground commander's maneuver.
- Interdiction and destruction of enemy armored vehicles moving against friendly forces.
- Isolation of urban objectives.
- Reconnaissance.
- Security of friendly locations.
- Convoy escort duty.
- Precision engagement of hardened point targets.
- Participating in show of force operations.
- Escorting NEO mission aircraft.

(2) ***Other Missions.*** Attack helicopters may be called on to perform some additional, nontraditional roles during urban operations. This is particularly true during support operations and stability operations in urban areas. Additional missions may include:

- Assisting, for limited periods, in the control and coordination of fires with the maneuver of ground forces.
- Providing limited relay of radio messages from isolated ground units.
- Marking or identifying specific buildings and areas by smoke, fires, or targeting lasers.
- Videotaping routes or objectives for later analysis by ground commanders.
- Providing navigational and directional assistance to ground units.
- Providing limited area illumination by infrared or white light using either on-board sources or illumination rockets.
- Providing countersniper and countermortar armed reconnaissance patrols around friendly unit locations.

(3) ***Weapons Limitations.*** Urban terrain limits weapons employment.

(a) Weapons use may be limited by the short arming/slant ranges within the urban area. Precision weapons, such as TOW and Hellfire missiles, require about 65 and 500 meters minimum range, respectively, to reliably arm and stabilize on the intended target. Often, fire from longer ranges actually improves accuracy. The shaped charge of the Hellfire produces less damage and over-pressurization than the TOW's high-explosive rounds when fired against buildings. Window engagements are generally not recommended, since the missile will usually impact the far wall of the structure, expending its blast energy away from the structure. Missile impact on the facing structure will normally cause over-pressurization inside the structure (near the impact) as well as secondary fragmentation of wood/concrete, which can neutralize or stun occupants in the vicinity of the impact.

(b) Extensive use of precision weapons by several units in close proximity may cause coordination problems with target identification and designation.

(c) Laser designation by both ground and aerial systems may be degraded by the large expanses of polished, flat reflective surfaces common in many urban areas. High

volumes of smoke and dust associated with burning buildings and urban combat can prevent accurate laser designation required for precision engagements.

(d) Aircraft cannon fire against buildings can be devastating. These fires provide excellent suppression and can drive enemy forces away from firing positions or fix the enemy in place until ground maneuver forces can destroy him. Enemy positions that have been struck by fire can normally be reoccupied quickly by the enemy. Ricochets from these rounds are common; they can cause additional collateral damage and pose a danger to nearby friendly forces.

(e) Target identification and marking may be difficult because of heavy smoke and dust rising from urban fires and explosions. Some smoke from fires in industrial areas may be highly toxic or irritating. Pilots may have to don chemical protective equipment that hinders target detection and engagement. Friendly unit locations and personnel can be marked with colored panels, glint tape, strobe lights, and colored smoke. Targets can be marked with infrared laser pointers, such as the GCP-1 Ground Commander Pointer/Illuminator, colored M203 smoke rounds, M203 or mortar flares burning on the ground, or tracer fires. In some situations, improvised spotlights can also be used.

(f) Although fire from stationary positions is more accurate, running fire is normally safer for the aircraft due to enemy ground fire. If possible, ground commanders should avoid directing pilots along a gun-target line that passes over friendly troops. Gun-target runs that are perpendicular to the friendly unit's front are normally best.

(g) 2.75 rockets (area fire) with HE warheads have a burst radius in excess of 50 meters and are effective in the destruction of C4 structures, thin-skinned vehicles, ADA and damaging/breaching concrete and wood structures. But when fired in pairs or more, the rockets have a large dispersion pattern and pose a potential accuracy and fratricide problem.

b. **Assault and Lift Helicopters.** Infantry units may be supported by a variety of assault or lift helicopters, normally the UH-60 and CH-47. These assets can be crucial for the flexible and responsive movement of troops and supplies and C2.

(1) ***Common Missions.*** The most common missions assigned to assault and lift helicopters during urban operations are:

- Air assaults.
- CASEVAC/MEDEVAC.
- Air movement of troops and supplies.
- Emplace logistical resupply points.
- Conduct/support C2 operations.
- Conduct/support NEO.

(2) ***Other Missions.*** In addition to the missions listed above, assault/lift helicopters may be called on to perform some additional, nontraditional roles or roles requiring special mission equipment. Additional missions may include the following:

- Conduct EW operations.
- Conduct combat search and rescue (CSAR).
- Emplace aerial delivery mines; for example, Volcano mines.
- Emplace large/heavy obstacles (abandoned vehicles, concrete dividers, and so on).

c. **Aircraft Power Limitations and Time on Station.** The need to deliver hovering fires from temporary battle positions may require the aircraft to carry less than a full load

of munitions or fuel. This is especially true in hot climates and high altitudes. Reduced loads mean more frequent trips to forward area refuel and rearm points and less time on station. Long route distances during air movements may require the establishment of forward arming and refuel points (FARP) along the route prior to operations. Climate will also affect the number of troops or amount of supplies the aircraft can transport.

d. **Command and Support Relationships.** From the ground unit perspective, helicopters are most effective when they operate under the OPCON of the ground unit commander closest to the enemy. Normally, the Infantry battalion is the lowest level granted formal OPCON of helicopters. During attack helicopter operations, the Infantry battalion commander is rarely able to identify the precise location of enemy forces or to coordinate aerial fires with friendly squad and platoon maneuver. He often must pass the responsibility for close coordination of attack helicopter fires to the company commander or platoon leader on the scene. This ground maneuver leader can direct the efforts of only a few aircraft at a time. It may be more effective for the aviation unit to retain control of its individual aircraft and operate by continuously rotating attack helicopter elements into the battle area where they then coordinate their attacks with the ground commander's maneuver. Generally, the smaller and more decentralized the combat operations, the better it is to have armed aircraft coordinate directly with the small-unit leader on the ground. The larger, more centralized the combat action, the better it is to retain control of armed aircraft by the aviation headquarters. Whichever command and support relationship is chosen, both the ground and the aviation headquarters must understand what is expected of the other. Close liaison and clear, concise verbal communications are important.

e. **Pickup Zone (PZ) and Landing Zone (LZ) Selection.** Care must be taken when selecting a PZ or LZ. Urban areas may often contain actual or potential debris that is either on the surface or supersurface of the urban area. For example, surface debris can contain rubble that can damage the helicopter due to the aircraft's rotor wash. Likewise, buildings may be poorly constructed and pieces of roofing or siding may also damage the helicopter due to the rotor wash. Downing of rotary wing aircraft is possible and significant collateral damage may occur.

G-36. TACTICAL AIR

A battalion may be supported by USAF, USN, USMC, or allied fighters and attack aircraft while fighting in urban areas.

a. **Advantages and Disadvantages.** Some advantages and disadvantages of CAS are:

(1) ***Shock and Concussion.*** Heavy air bombardment provides tactical advantages to an attacker. The shock and concussion of the bombardment reduce the efficiency of defending troops and can destroy defensive positions.

(2) ***Rubble and Debris.*** The rubble and debris resulting from air attacks may increase the defender's cover while creating obstacles and obstructions to the movement of attacking forces.

(3) ***Proximity of Friendly Troops.*** The proximity of opposing forces to friendly troops may require the use of precision-guided munitions and may require the temporary disengagement of friendly forces in contact. The AC-130 is an air weapons platform of

choice for precision urban engagements if the proximity of friendly troops precludes other tactical air use.

(4) ***Indigenous Civilians or Key Facilities.*** The use of air weapons may be restricted by the presence of civilians or the requirement to preserve key facilities within a city.

(5) ***Limited Ground Observation.*** Limited ground observation may require the use of airborne FAC.

b. **Offensive Operations.** CAS may be employed during offensive operations—

- To support the isolation of the urban area by interdicting entry and exit routes.
- To support attacking units by reducing enemy strongpoints with precision-guided munitions.
- To conduct tactical air reconnaissance and to provide detailed intelligence of enemy dispositions, equipment, and strengths.

c. **Defensive Operations.** CAS may be employed during defensive operations—

- To strike enemy attack formations and concentrations outside and inside the urban area.
- To provide precision-guided munitions support to counterattacks for recovering fallen friendly strongpoints.

G-37. AIR DEFENSE

Basic air defense doctrine does not change when units operate in urban areas. The fundamental principles of mix, mass, mobility, and integration all apply to the employment of air defense assets.

a. The battalion staff must consider the following when developing the air defense plan:

(1) Enemy air targets, such as principal lines of communications, road and rail networks, and bridges, and friendly troop locations are often found in and around urban areas.

(2) Good firing positions may be difficult to find and occupy for long-range air defense missile systems in urban areas. Therefore, the number of weapons the commander can employ may be limited.

(3) Movement between positions is normally restricted in urban areas.

(4) Long-range systems can provide air defense cover from positions on or outside of the edge of the urban area.

(5) Radar masking and degraded communications may reduce air defense warning time for all units. Air defense control measures must be adjusted to permit responsive air defense within a reduced warning environment.

b. Positioning of the Avenger weapons system in urban areas is often limited to more open areas to prevent weapons masking such as parks, fields, and rail yards. Avengers may be placed on rooftops in dense urban areas to provide protection against air attacks from all directions. This should be accomplished only when justified by the expected length of occupation of the area and the enemy air threat.

c. MANPADS, such as Stingers, provide protection similar to nonurban operations. When employed within the urban area, rooftops normally offer the best firing positions.

d. Heavy machine guns emplaced on rooftops can also provide additional air defense protection.

G-38. ANTIARMOR WEAPONS

The urban environment will not change the tactical use of these weapons, but it can limit how they are employed. Some of those limitations are: stand-off; obstructions for wire-guided missiles; displacement after engagements; firing in-depth engagements; more obstacles; increased danger zones; and all-round security. Although antiarmor weapons are primarily designed to destroy armored vehicles, they also can be used to damage or destroy some field fortifications. Additionally, they can be used for ballistic breaching of doorways that are being used for entry points to buildings, or by creating deceptions just before the assault element enters the actual initial breach (entry) point. Larger antiarmor systems that have high magnification day and thermal sights can be used to detect snipers and to suppress or destroy them with long-range precision fires. Most medium and heavy antiarmor weapons have their own local security since they are crew served, thus eliminating the need to assign additional security. However, when these weapons are fired, they quickly become priority targets, making them susceptible to enemy fire. Major considerations for planning offensive and defensive operations are:

a. **Offensive Operations.** When employing antiarmor weapons in the offense, assign them to an area that overwatches the assault force and where mounted enemy ambushes are likely such as roads, road intersections, alleys, and large open areas. Place them so they can establish a blocking force along main access routes to the objective and where they can isolate the objective against armor counterattacks.

Note: Overhead wire obstructions are the main concern when firing guided missiles. Wire obstacles will be prevalent throughout urban areas causing problems with in flight missiles, wire guided missiles, and rockets. Overhead wires can deflect guided missiles from their flight path when their control fins make contact with the wire. Firing a wire guided missile over power lines can burn the tracking wires, causing the loss of the missile, and, possibly, causing damage to the weapon system and crew. Most missiles are armed 50 meters or more from the weapon.

b. **Defensive Operations.** When assigning the antiarmor weapons their engagement areas, ensure they are positioned to achieve maximum standoff. They should also be positioned in-depth to exploit their maximum ranges. This may not always be possible within urban areas, which contain numerous obstacles and relatively short engagement ranges. Close engagement areas that limit standoff will only give the crew time for one shot, with no time for reloading if they have to fire multi-engagements. For this reason, antiarmor weapons should always be employed in pairs. One fires and the other supports by fire.

c. **TOW.** These weapon systems are used to defeat heavy or light armor threats from outside or inside the urban area, in lieu of assigned armored vehicles. They cannot apply the same amount of firepower but, when employed in pairs, they can destroy and disrupt armored units long enough to give commanders time to bring other assets into play. The TOW can engage targets at a range of 3,750 meters using an AN/TAS 4 12X day/night 24X zoom thermal sight. All BFV platoons have organic TOWs on each BFV.

(1) ***Advantages.*** Some of the employment advantages of the TOW are:

- Offers greater range, accuracy, and lethality than other antiarmor weapons.

- Will destroy all known armor vehicles.
- Gives leaders far seeing OP capabilities day or night using the day sight and thermal sight.
- The HMMWV TOW carrier has a M240 machinegun for crew safety, and can be used against dismounted enemy troops. This gives the leader a two-fold weapon when used to overwatch assault elements or when isolating buildings.
- The HMMWV carrier has a HIMS (HMMWV Interchangeable Mount System) that allows the TOW system to be in a ready to fire configuration with the addition of the M249 or the M240/.50 caliber also mounted. The HIMS can also mount an M19 Grenade launcher but not at the same time as the TOW.
- The TOW system can assist in detecting enemy snipers and destroy or suppress them. When engaging a sniper in a building, aim at the wall next to the window or fortified position he is firing from. The structure will set off the missile warhead, causing inner spalling of the wall and tremendous heat within the room. If a missile is fired through a window and impacts on a back wall, debris and heat from the explosion will permeate the room.

(2) ***Disadvantages.*** Some of the employment disadvantages of the TOW are:

- The missile is wire guided, which restricts firing from elevated positions where power lines cross the engagement areas.
- The crew is vulnerable to small arms fire when mounted on the HMMWV carrier.
- The missile has a noticeable firing signature that can give away positions.
- The missile has dangerous backblast areas that restrict firing inside of structures.

d. **Javelin.** The Javelin is a crew-served, medium range, fire-and-forget system. Unlike conventional wire-guided missiles, the Javelin automatically guides itself to the target after launch. Soldiers can reposition immediately after firing or reload to engage another threat. The Javelin has two attack modes, the top-attack and the direct-attack. The Javelin command launch unit (CLU) incorporates a passive surveillance sight, fully capable in day or night, at ranges of 2,000 meters, in most weather conditions.

(1) ***Advantages.*** Some of the employment advantages of the Javelin are:

- Has a soft launch design, which allows it to be safely fired from inside buildings or covered fighting positions.
- Will destroy all known armored vehicles.
- Gives leaders far seeing OP capabilities day or night using the 4X day sight and 4X and 9X thermal sight
- Offers more range, accuracy, and lethality, than the Dragon.
- Fire-and-forget, with no attached wires.
- In lieu of the TOW, the Javelin can assist in locating enemy snipers and destroy or disrupt them. When engaging a sniper in a building, aim at the wall next to the window or fortified position he is firing from. The structure will set off the missile warhead, causing inner spalling of the wall and tremendous heat within the room. If a missile is fired through a window and impacts on a back wall, debris and heat from the explosion will permeate the room.

(2) ***Disadvantages.*** Some of the employment disadvantages of the Javelin are:

- Overhead wires can impede the missile flight.
- The missile requires a large overhead clearance from launch point to target.

e. **Dragon.** The Dragon is a crew-served medium range antiarmor weapon that can be employed to track and engage targets at a range of 1,000 meters, with a 4X day sight or 4X thermal sight.

(1) ***Advantages.*** Some of the employment advantages of the Dragon are:

- Will destroy most armored vehicles.
- Can track and engage targets day or night.

(2) ***Disadvantages.*** Some of the employment disadvantages of the Dragon are:

- System is wire guided, which restricts firing from elevated positions where power lines cross the engagement areas.
- It has noticeable firing signatures that can give away positions.
- It has dangerous backblast areas that restrict firing inside structures.

G-39. MILITARY POLICE

Military police operations play a significant role by assisting the battalion in meeting the challenges associated with UO. MPs provide a wide range of diverse support in urban areas, to include area damage control, area security, and EPW operations and non-combatant operations. MP operations require continuous coordination with host nation civilian police to maintain control of the civilian population and to enforce law and order. MPs are not normally placed under the battalion's control, however it is likely that MP squad(s) may be available to assist the battalion when operations are conducted in urban areas. These MP assets may be attached or OPCON to the battalion for the duration of a specific mission and then will be released to the control of the brigade or battalion commander or to their parent unit. Their training in urban operations can be of great assistance for help in crowd control, roadblocks/checkpoints, and EPW control.

a. **Area Damage Control.** MP units take measures to support area damage control operations that are frequently found in urban areas. With the increased possibility of rubbling, MP units report, block off affected areas, and re-route movement to alternate road networks.

b. **Area Security.** MP units also secure critical areas, such as communications centers and water and electrical supply sources. These MP assets can assist a battalion that is assigned such a mission. (See Sections Vand VI.)

c. **EPW and Noncombatant Operations.** MP units are tasked with EPW and noncombatant operations and must perform them as far forward as possible. MPs operate collecting points and holding areas to briefly retain EPWs and noncombatants. EPW and noncombatant operations are of great importance in urban areas because the rate of capture of EPWs and the presence of noncombatants can be higher than normal. Battalions can use MP assets to assist them in conducting these types of operations.

G-40. COMMUNICATIONS

One of the biggest challenges for the battalion staff will be to maintain communications with subordinate elements. Buildings and electrical power lines reduce the range of FM radios. Remoting radio sets or placing antennas on rooftops can solve the range problem for CPs and trains. Companies do not have the assets to ensure continuous

communications and the battalion staff will have to plan for continual movement of battalion assets to support company operations.

a. **Wire.** Wire is a more secure and effective means of communications in urban areas. Wire should be laid overhead on existing poles, underground, or through buildings to prevent vehicles from cutting them.

b. **Messengers and Visual Signals.** Messengers and visual signals can also be used in urban areas. Messengers must plan routes that avoid the enemy. Routes and time schedules should be varied to avoid establishing a pattern. Visual signals must be planned so they can be seen from the buildings.

c. **Sound.** Sound signals are normally not effective in urban areas due to the amount of surrounding noise.

d. **Existing Systems.** If existing civil or military communications facilities can be captured intact, they can also be used by the Infantry battalion. An operable civilian phone system, for instance, can provide a reliable, although nonsecure, means of communication. Telephones should not be considered secure. Other civilian media can also be used to broadcast messages to the public. Evacuation notices, evacuation routes, and other emergency notices designed to warn or advise the civilian population must be coordinated at battalion level through the S1 or civil affairs officer. Such notices should be issued by the local civil government through printed or electronic news media. Battalions do not normally release such notices. Use of news media channels in the immediate area of operations for other than emergency communications must also be coordinated through the S1 or civil affairs officer.

G-41. SNIPERS

Commanders can make effective use of snipers during UO. They should be considered an important combat multiplier, and integrated into the fire plan and scheme of maneuver. Snipers are a precision weapon and must be used as such. If available, the XM107 .50 caliber heavy sniper rifle (HSR) can provide snipers with an antimateriel capability and improve countersniper effectiveness. The HSR is also an excellent weapon for penetrating sandbag barriers and most urban construction materials. Possible targets that can be engaged are:

- Radar systems.
- Missile systems.
- Fuel distribution systems.
- Aircraft (stationary, fixed, or rotary winged).
- Communications equipment.
- Generators.
- Light skinned vehicles.

Note: See Appendix E, for more information on sniper employment.